

0935050-09404

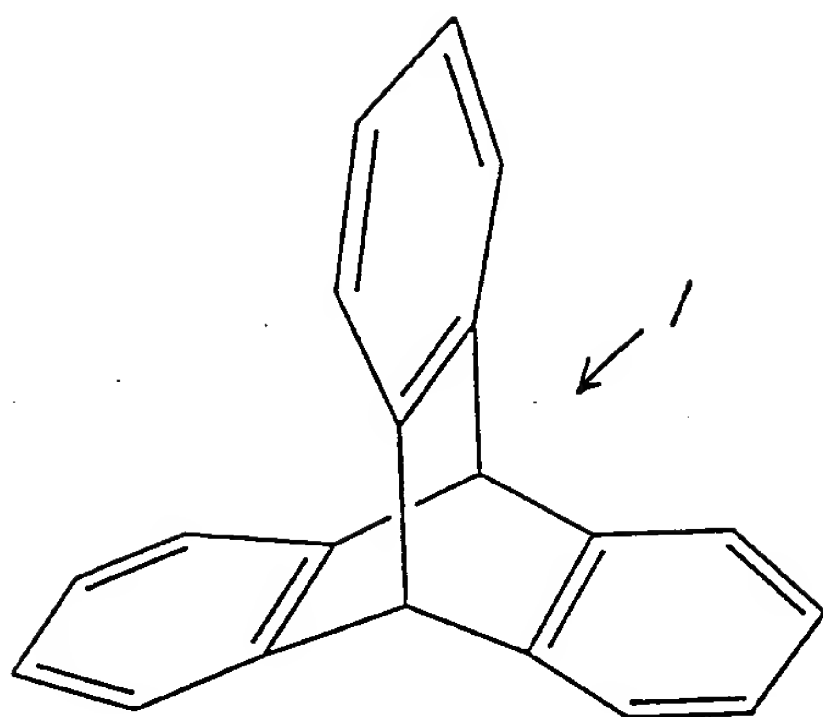
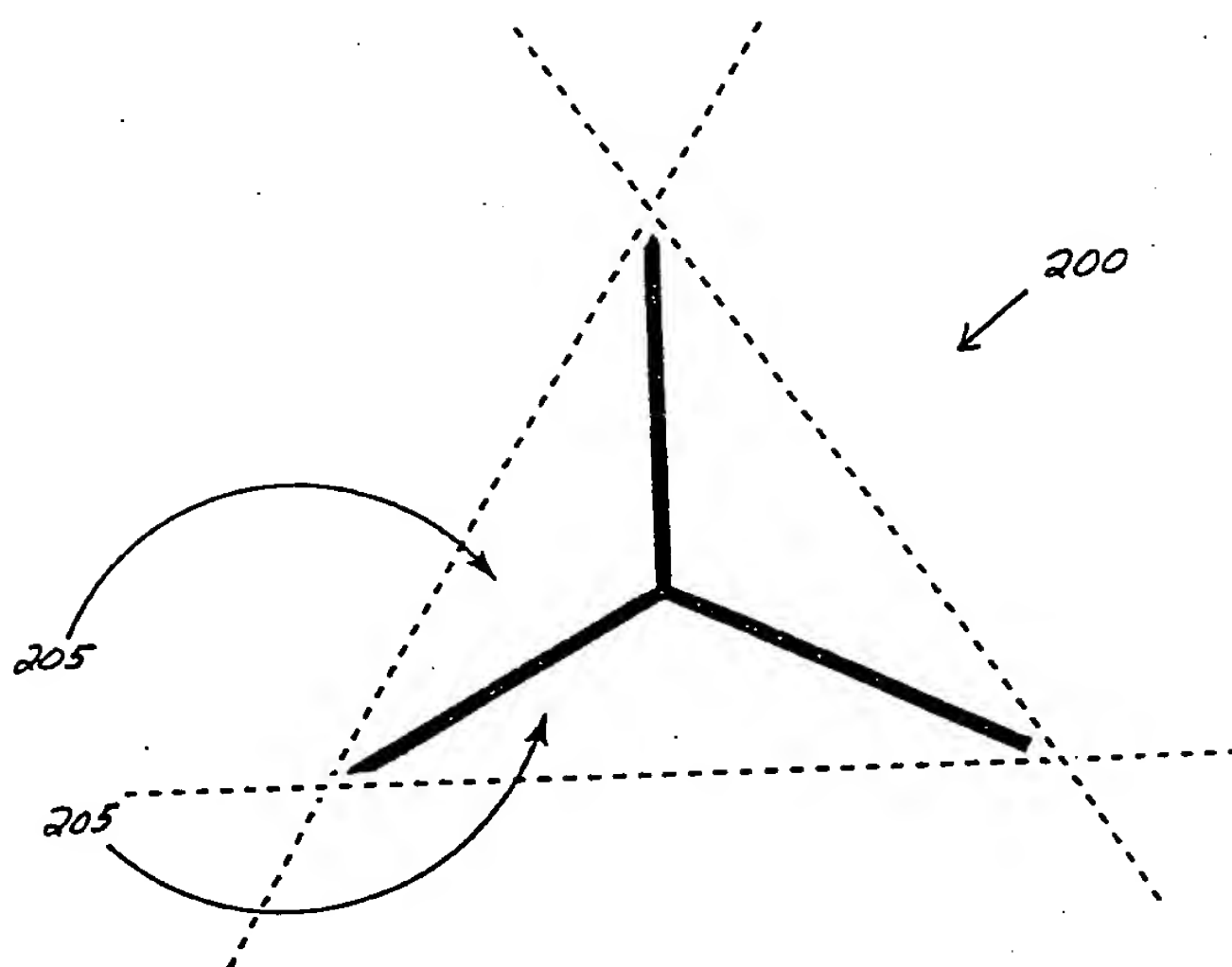


FIG. 1A
PRIOR ART



Chemical structure of a substituted fluorene derivative. The structure features a central fluorene core with two phenyl rings (labeled 220) attached at the 9-position. A hydrogen atom (H) is attached to the 1-position. Bond lengths are indicated: 2.50 Å for the C-H bond at the 1-position, and 3.26 Å for the C-C bond between the 1-position and the 2-position. A reference numeral 210 points to the central fluorene core.

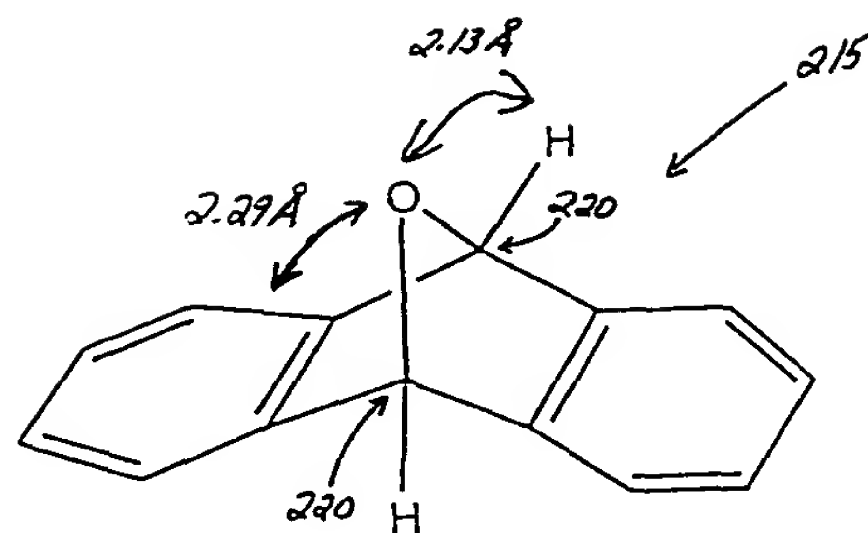


FIG. 1B

PRIOR ART

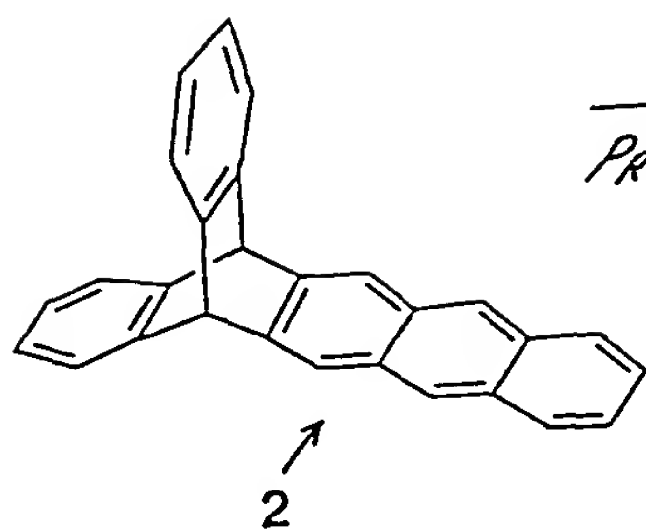
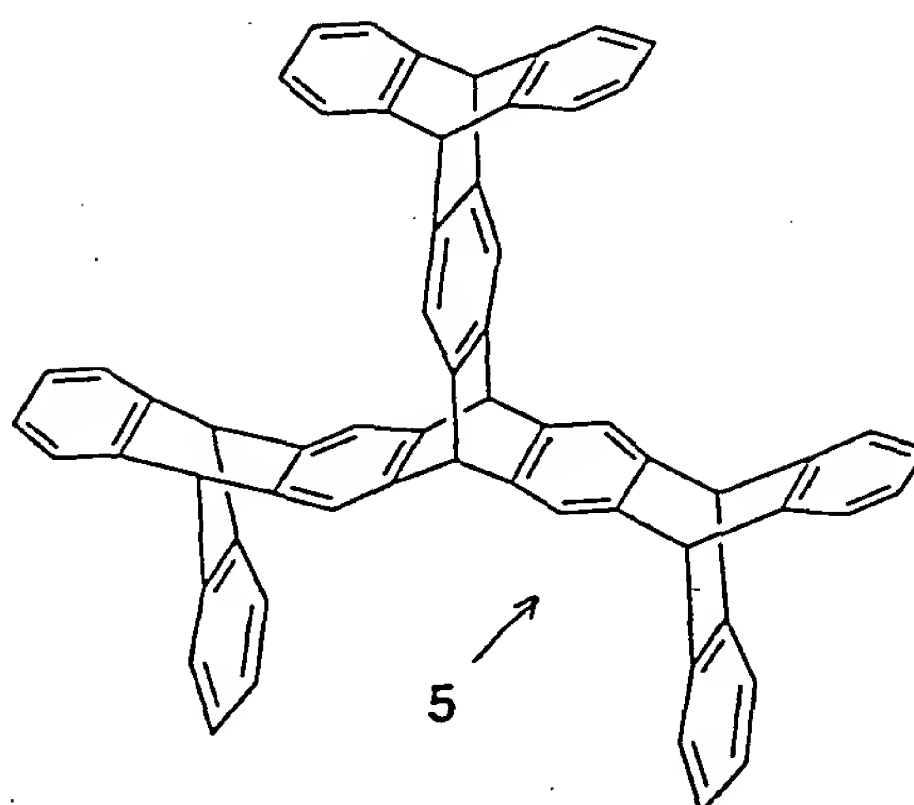
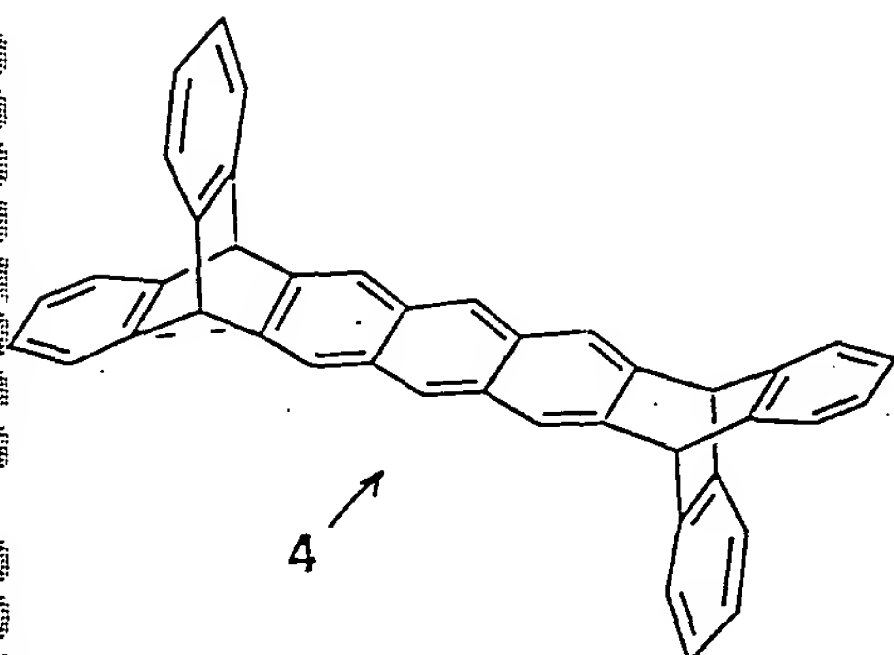
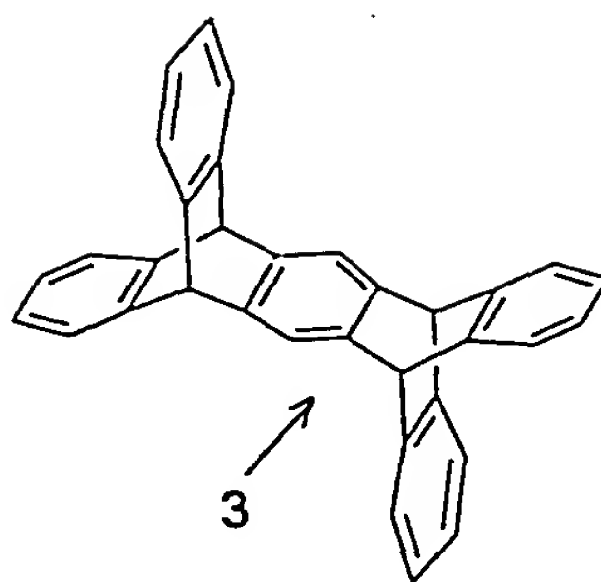


FIG. 1C
PRIOR ART

[illegible]



$X = \text{CH}_2, \text{O}, \text{NR}, \text{S}$

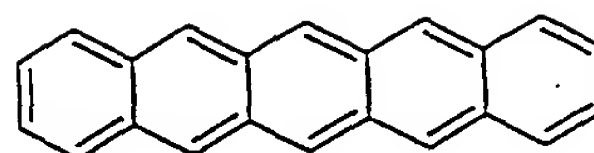
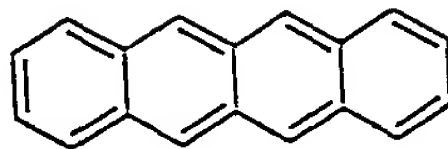
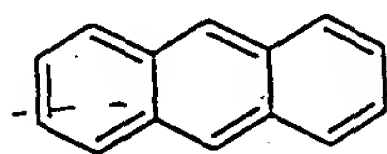
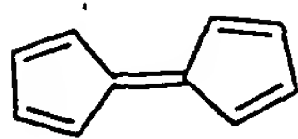
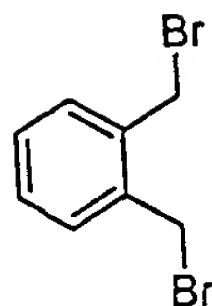
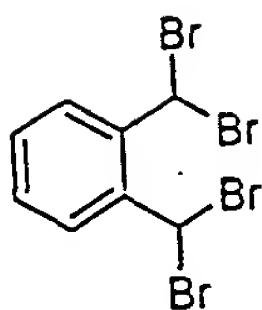
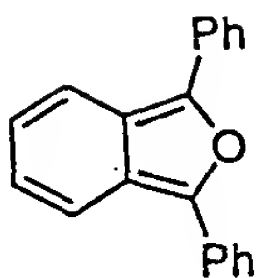
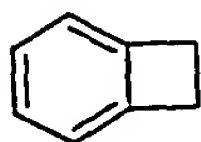
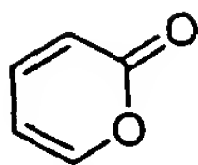
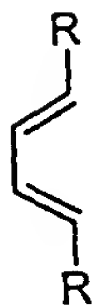
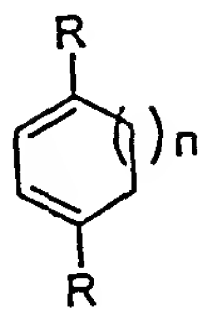
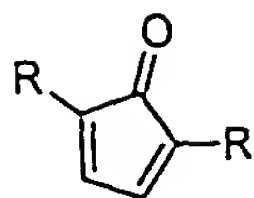
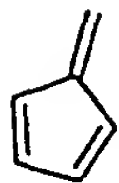


Fig. 1e

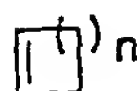
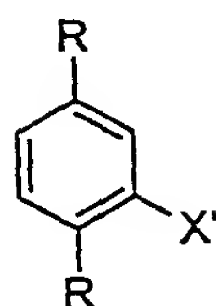
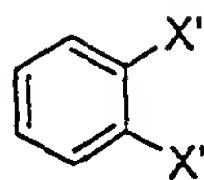
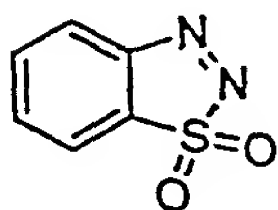
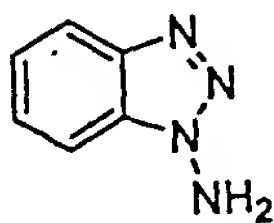
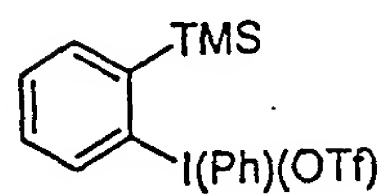
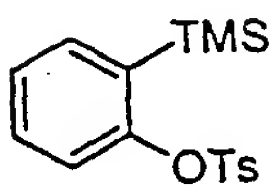
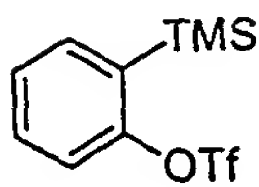
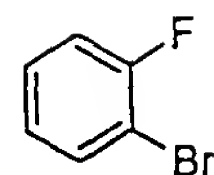
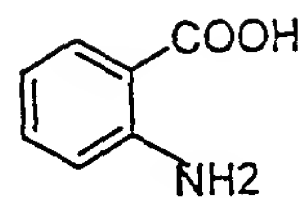
O=C1C=CC(=O)C=C1
$$X = \text{CH}_2, \text{C=O}, \text{O}, \text{NR}, \text{S}$$

$$X' = \text{Cl, Br, I}$$


FIG. 1f

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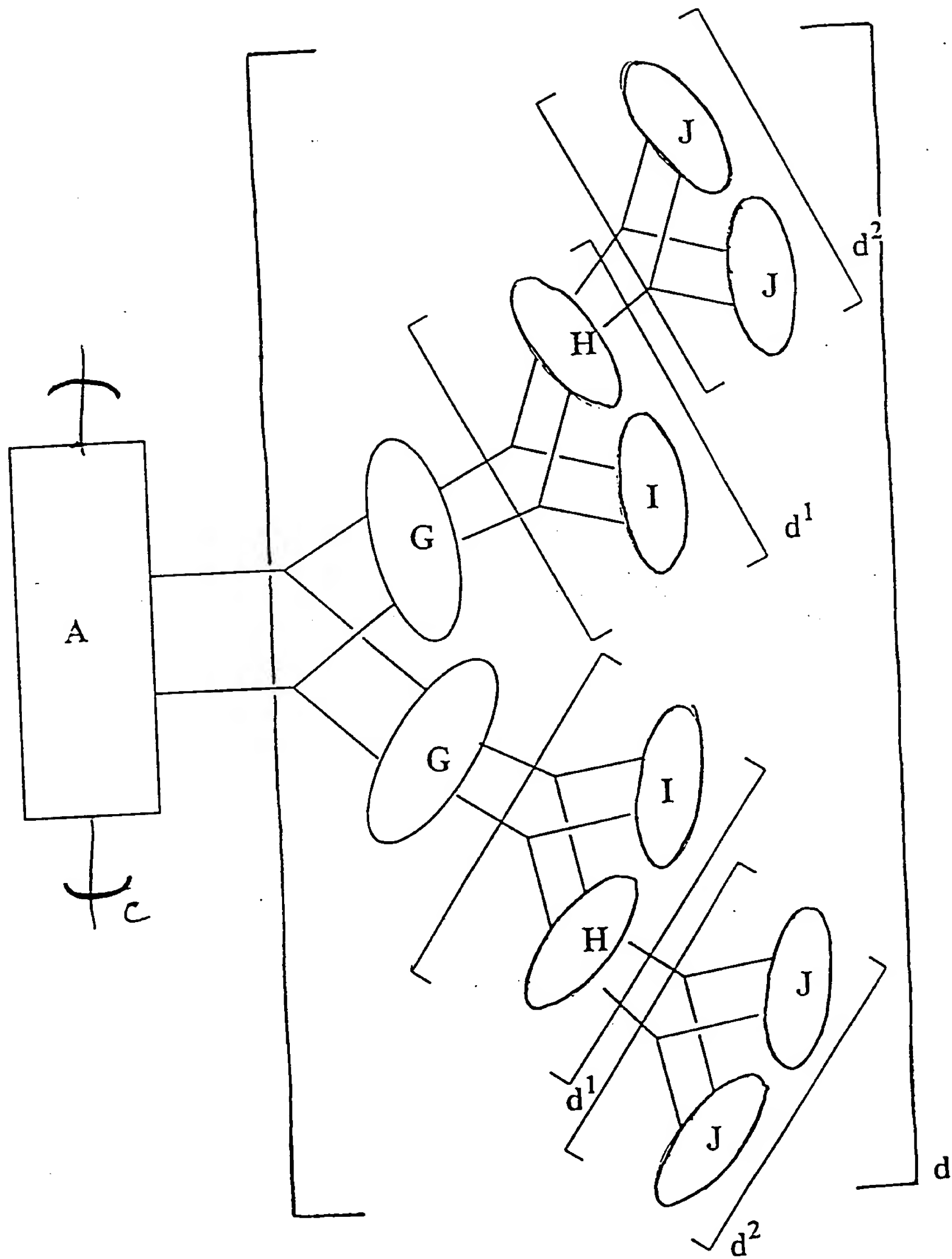
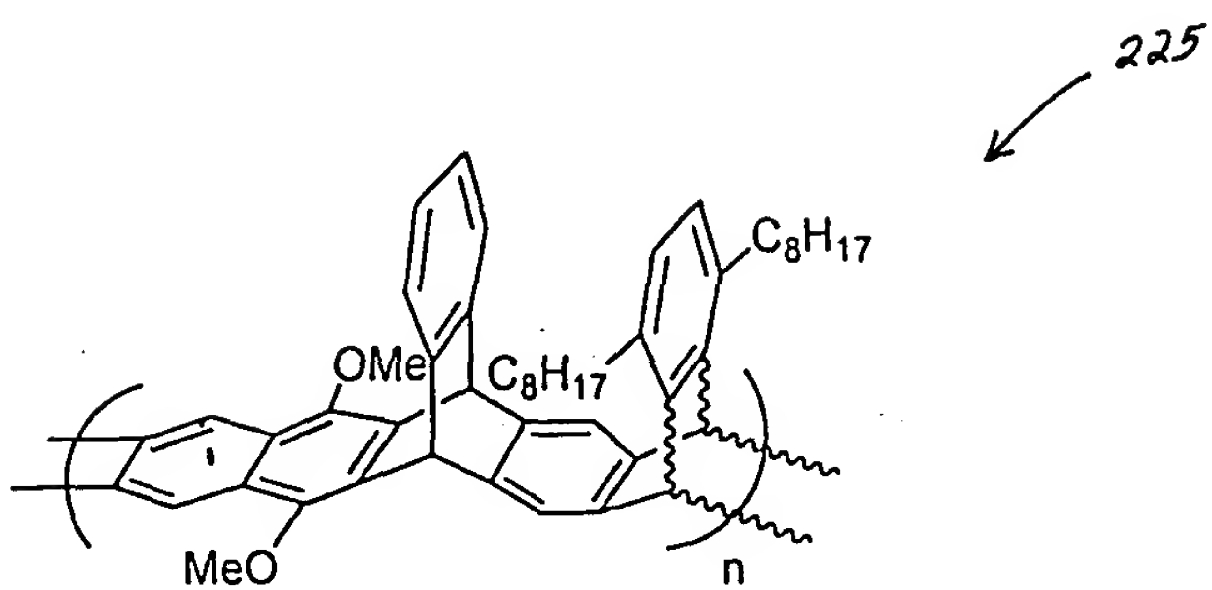


Fig. 1g

FIG. 1H



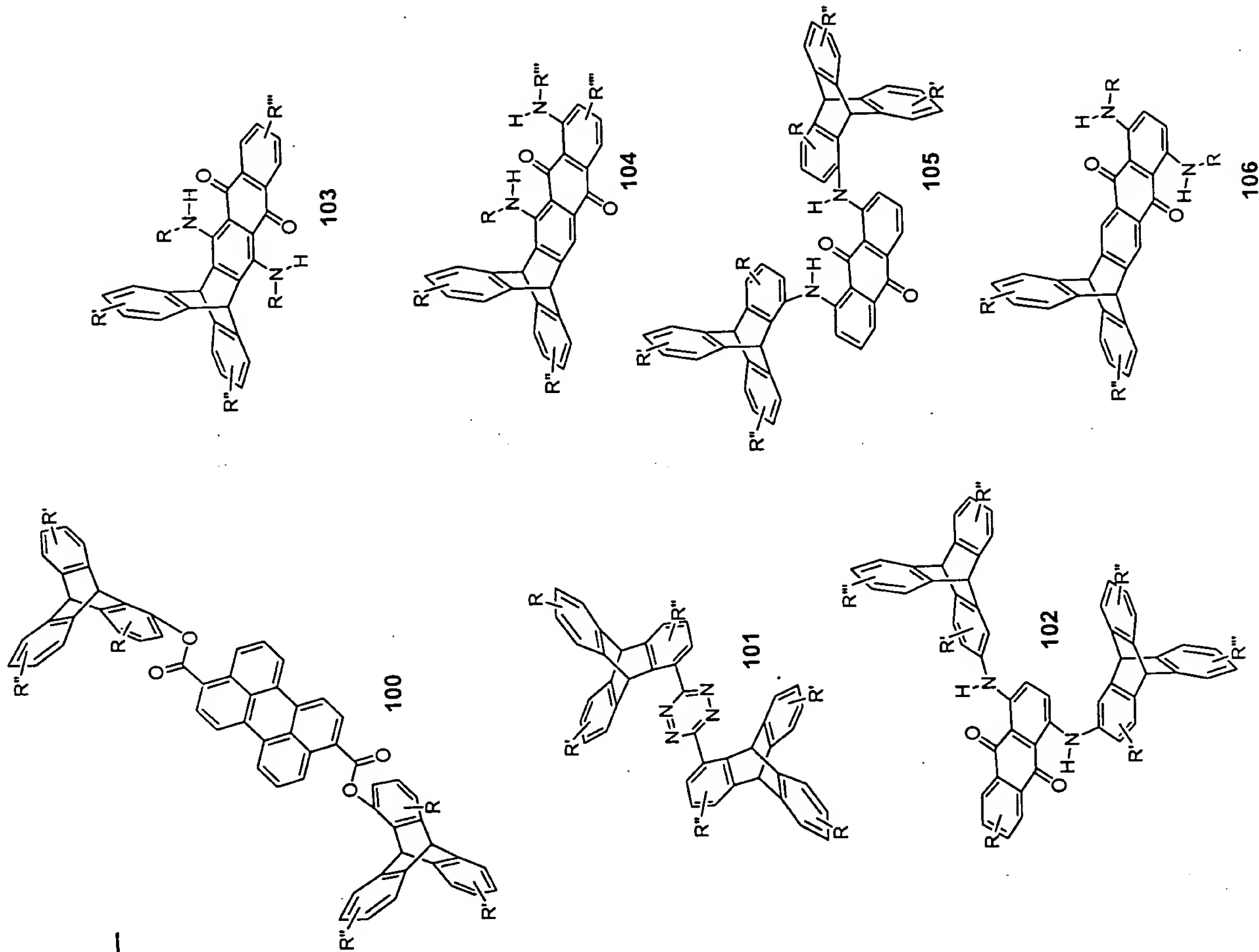
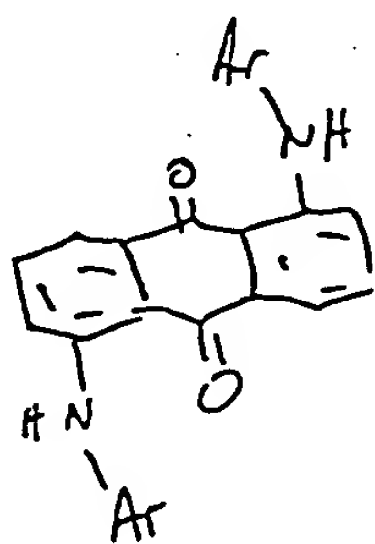
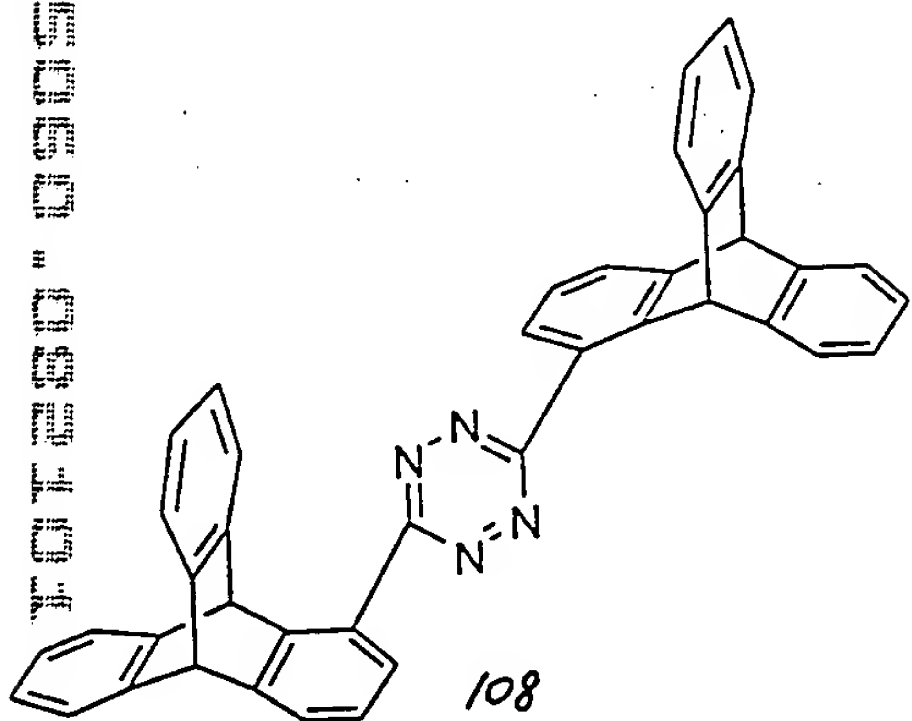
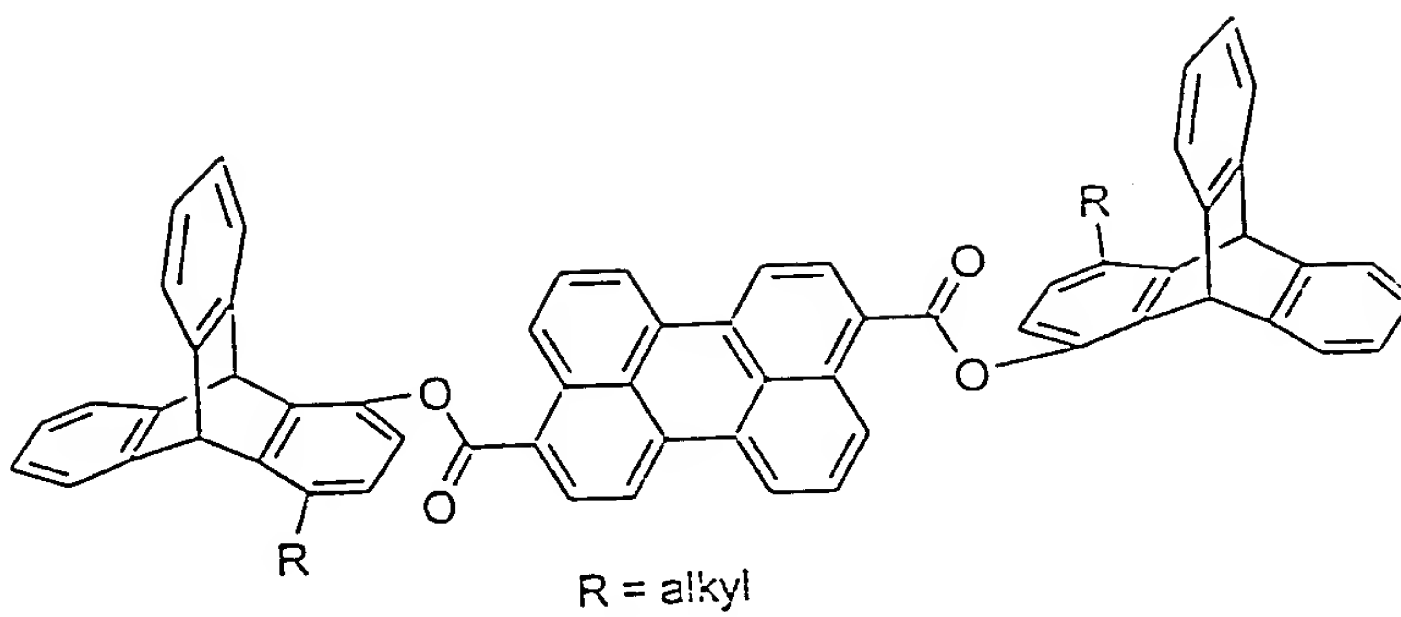
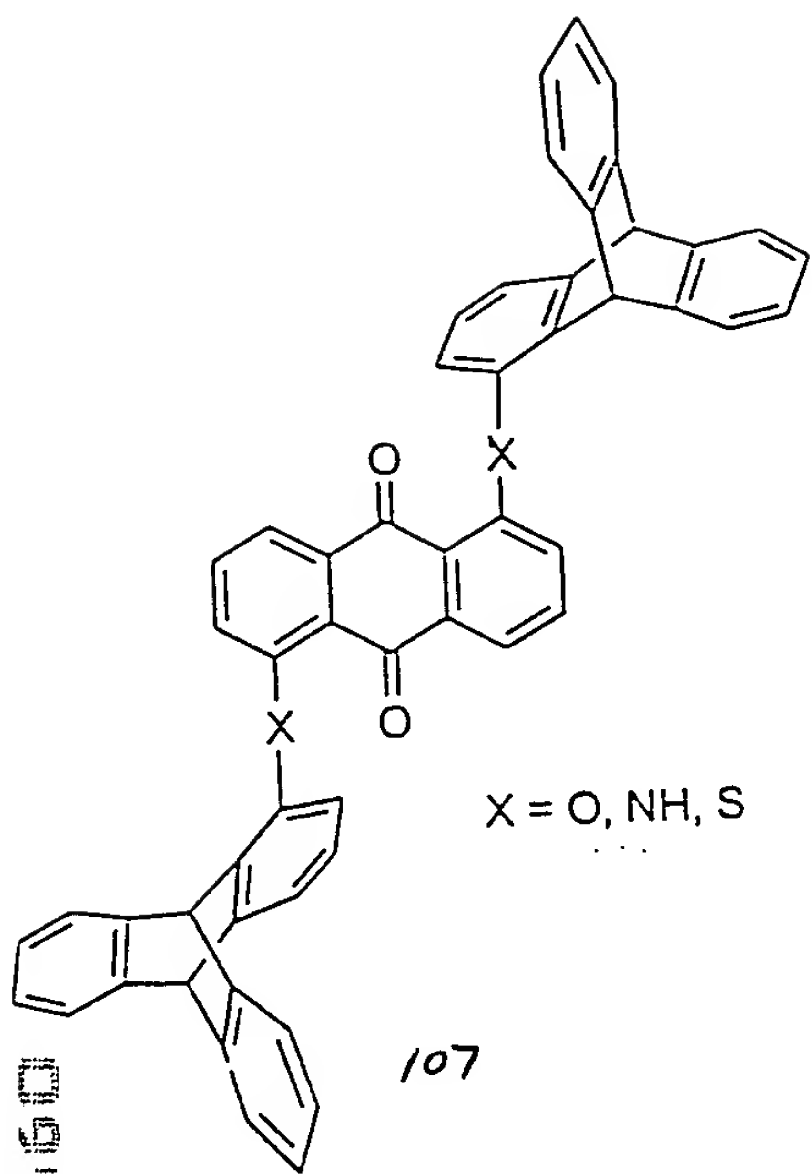
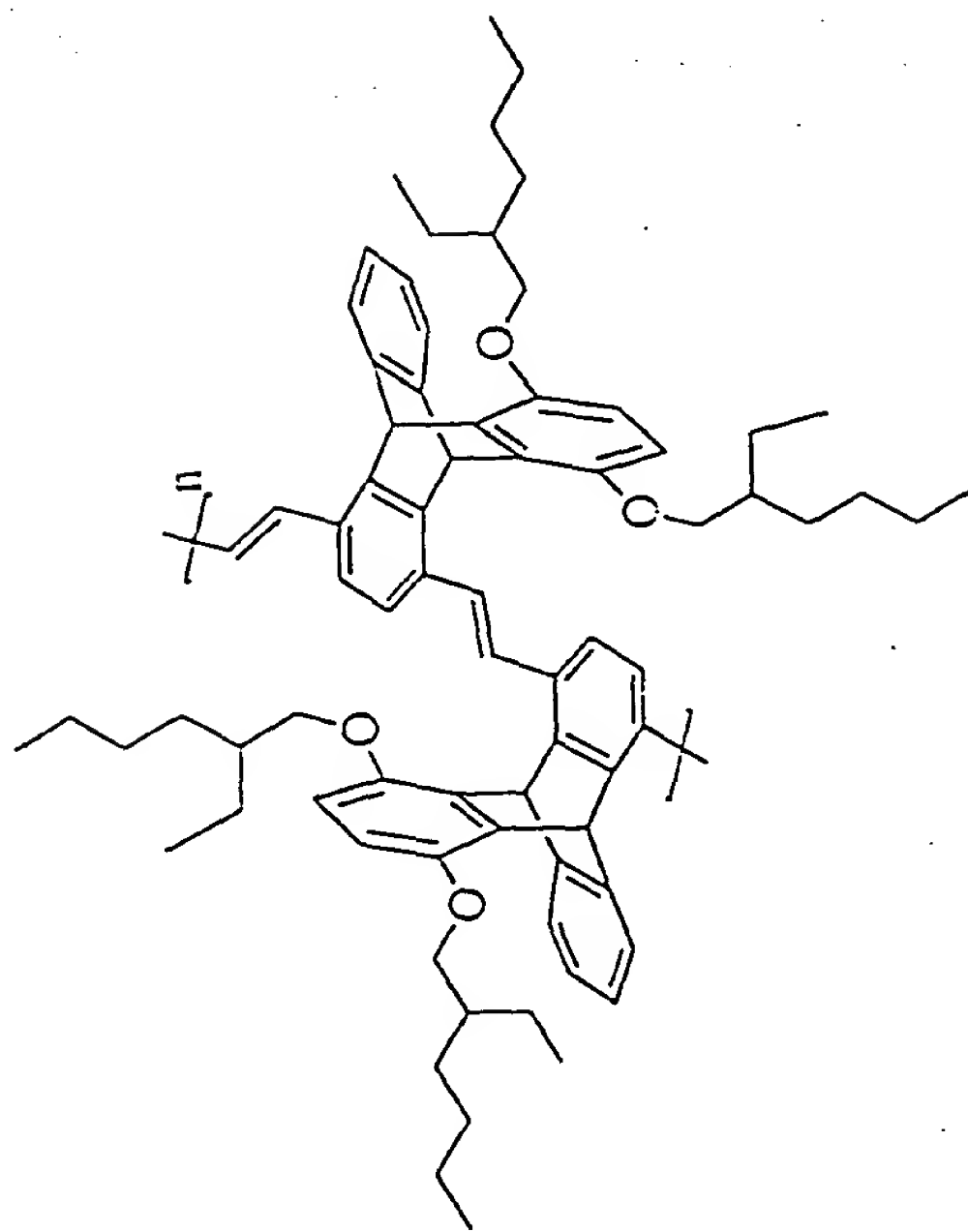


FIG. 1K

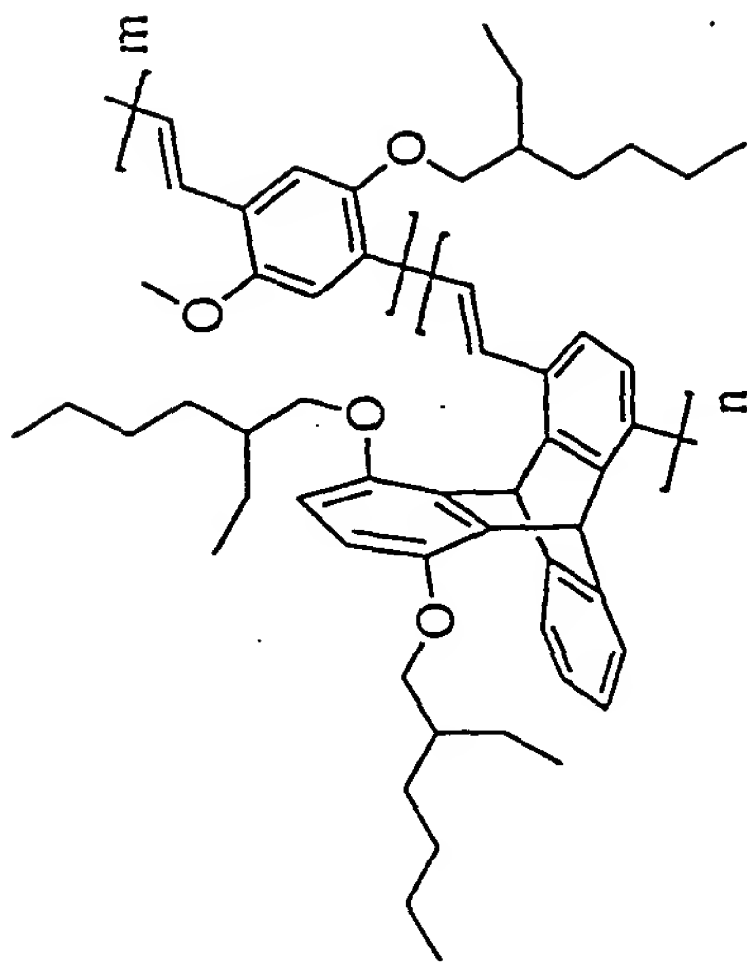


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Fig. 12



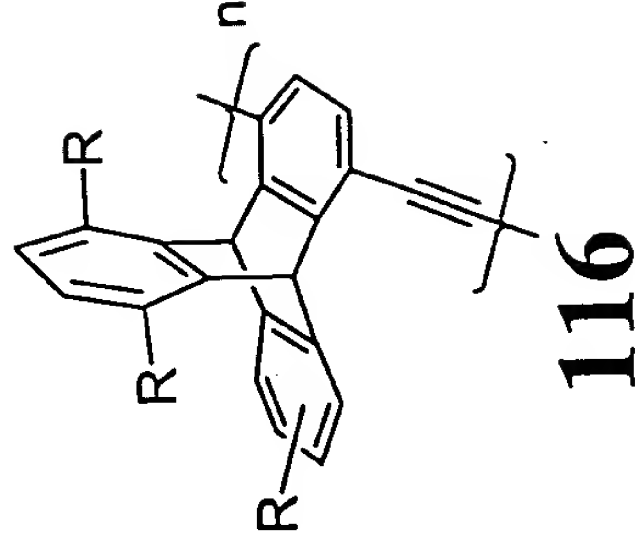
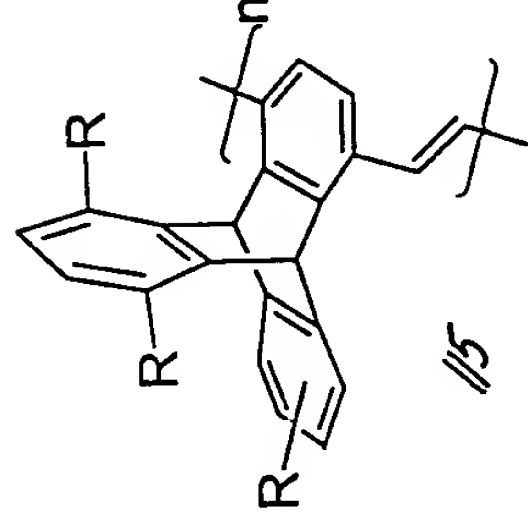
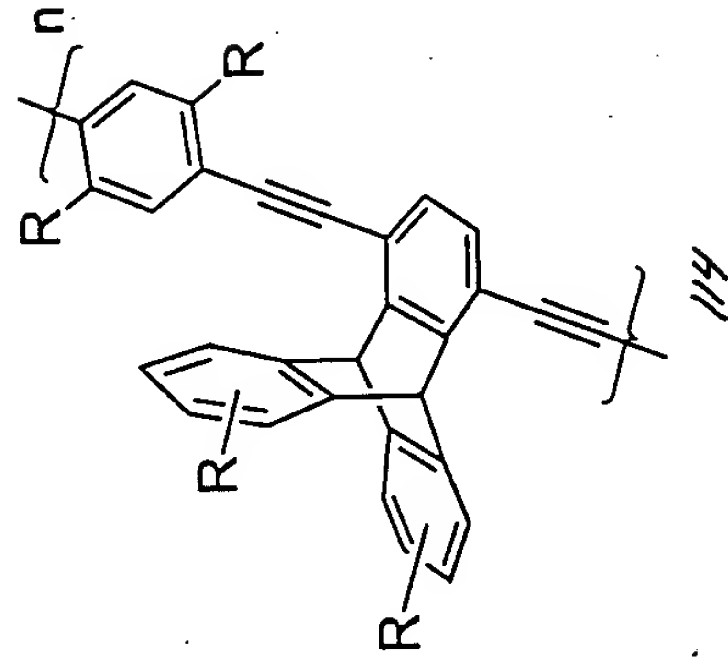
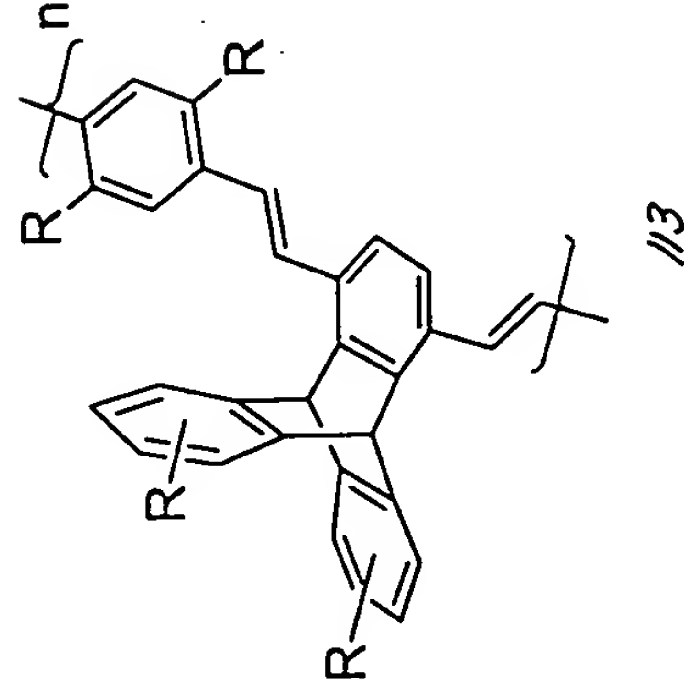
111



112

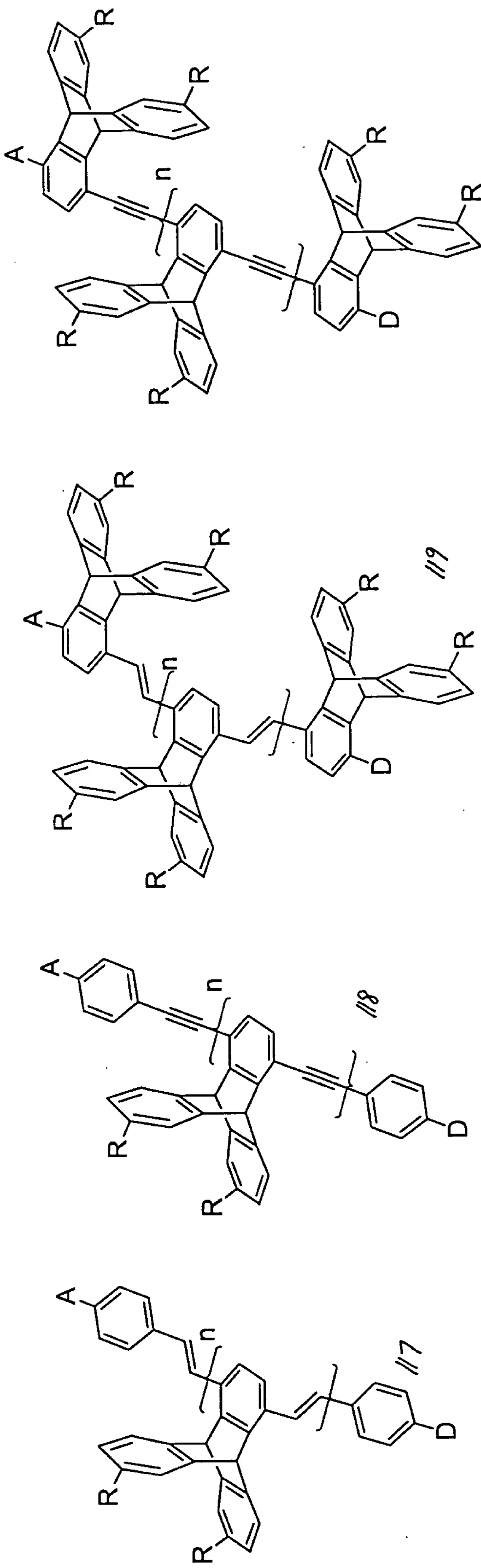
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FIG. 1M



$R = C_nH_{2n+1}, C_nF_{2n+1}, OC_nH_{2n+1}$

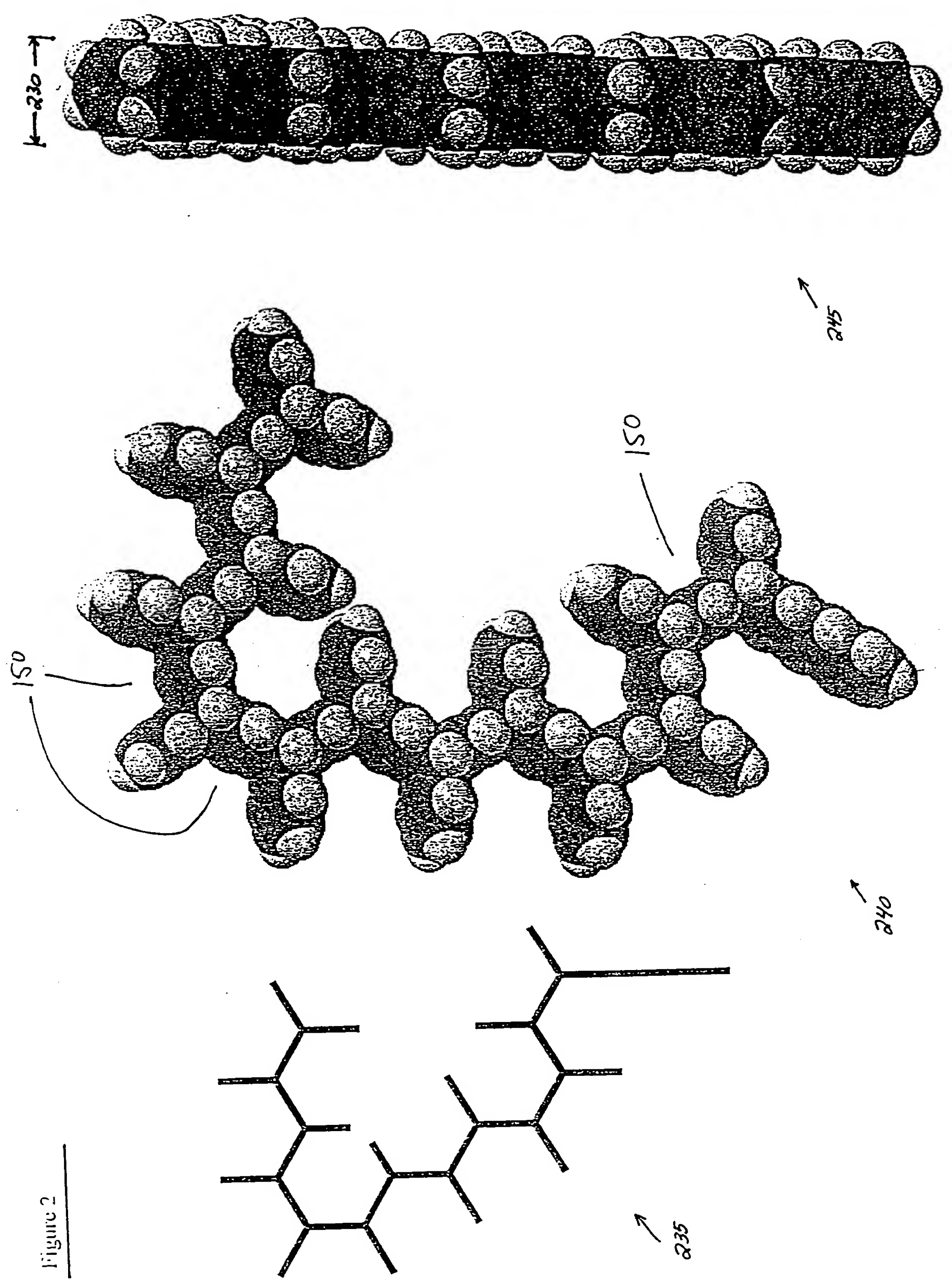
Fig. 10

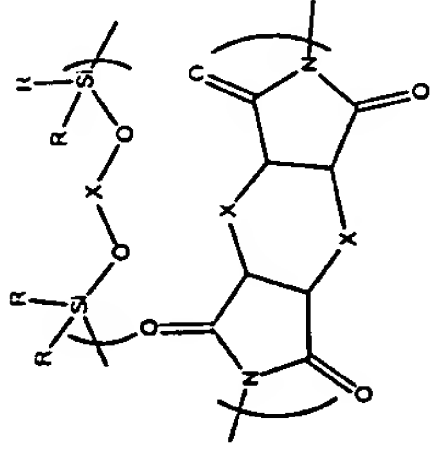


A = CN, C_nF_{2n+1} ;
D = $N(C_nH_{2n+1})_2$, OC_nH_{2n+1} ;
R = C_nH_{2n+1} , C_nF_{2n+1} , OC_nH_{2n+1}

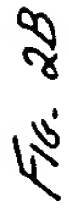
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Figure 2



[illegible]

X or Y contains an ipylene



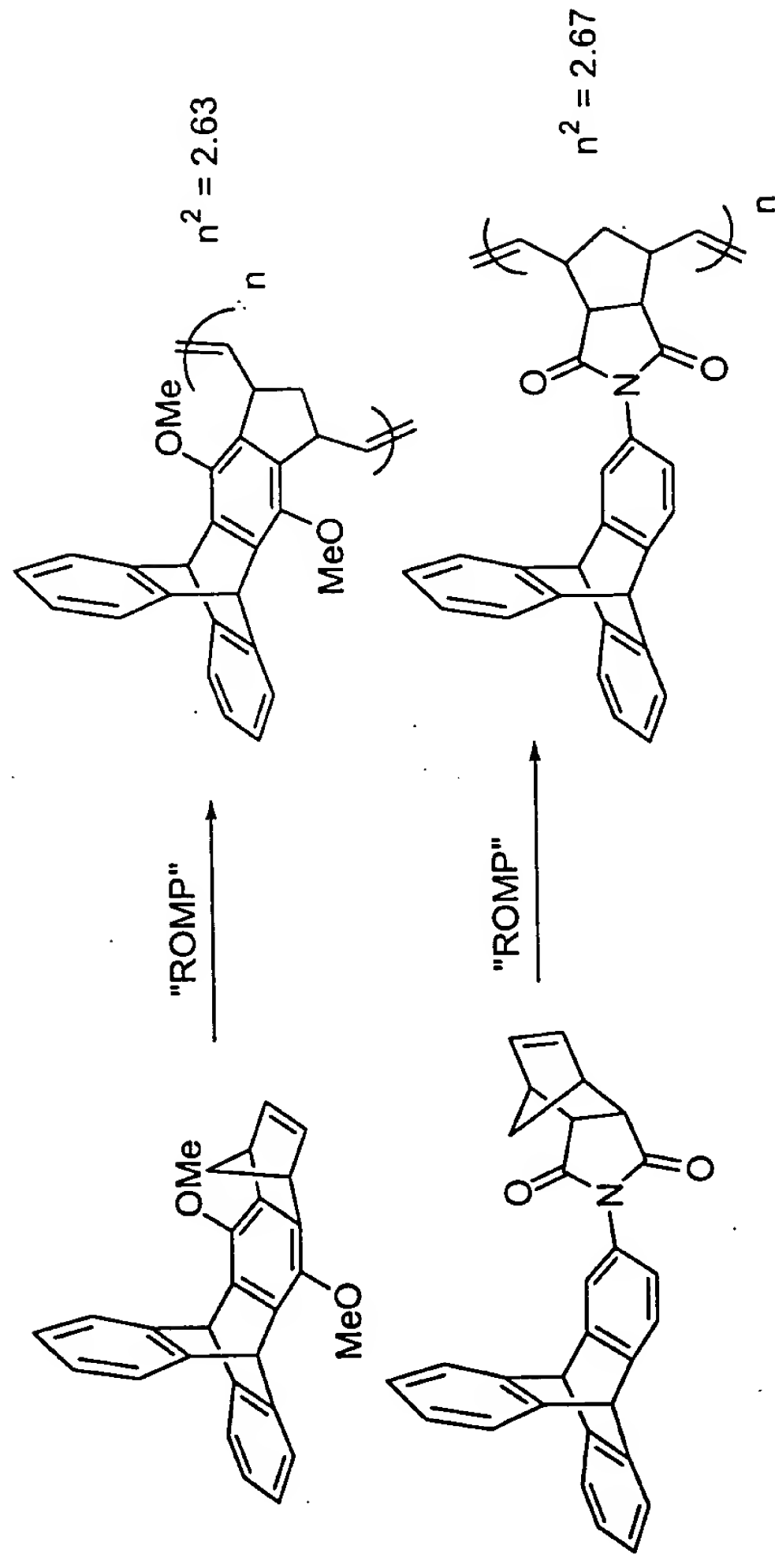
% = O, S, Cl, CR,



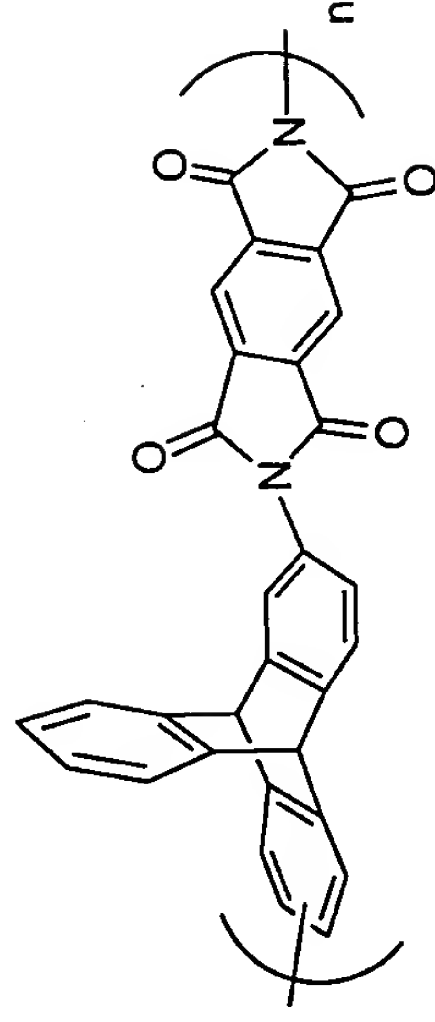
Where $X = Y$ or $X \neq Y$

If $X = Y$, then polymer may be atactic, isotactic or syndiotactic
If $X \neq Y$, then each block may be atactic, isotactic or syndiotactic

R = functionalized ipitycene



Random co-polymer : $n^2 = 2.72$



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FIG. 3

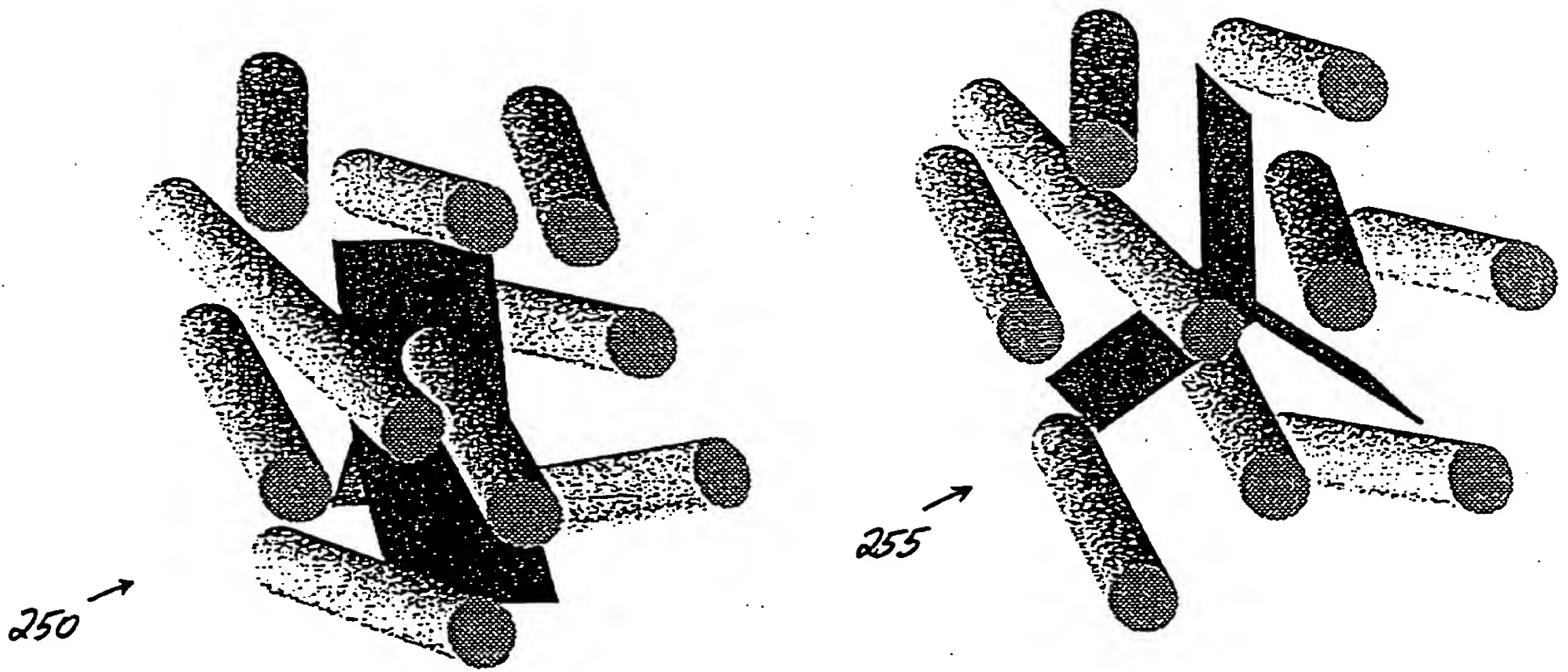
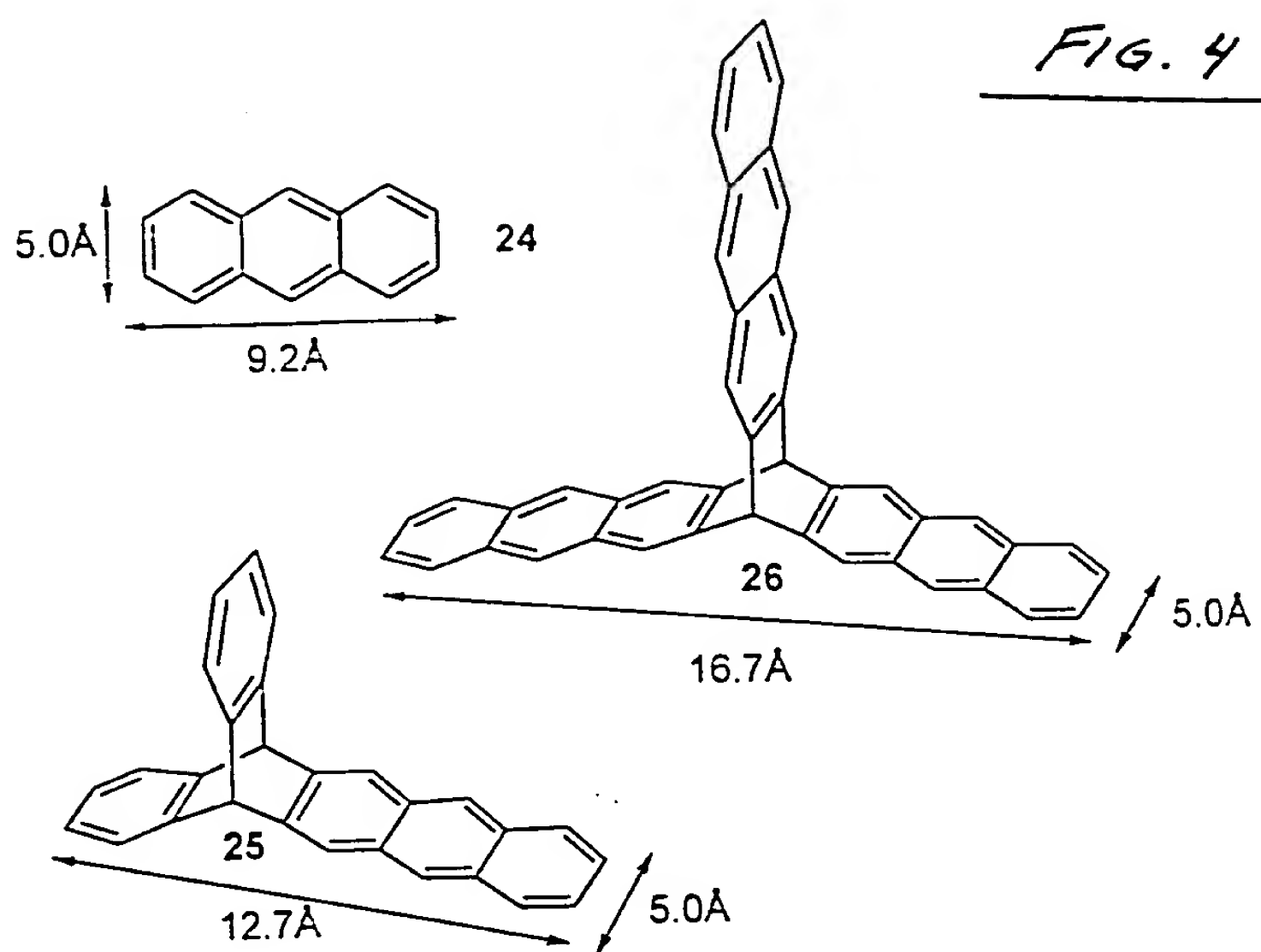
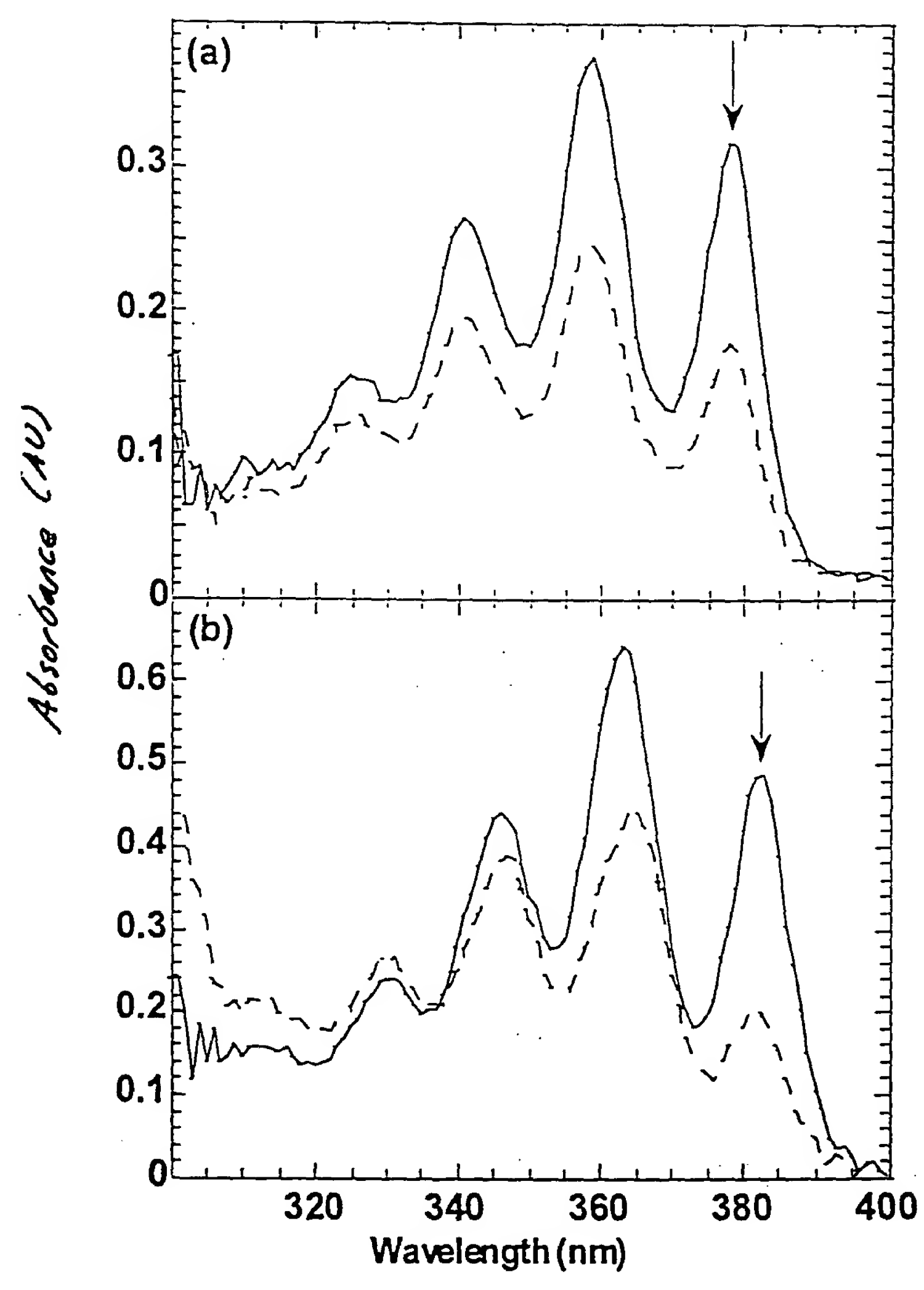


FIG. 4



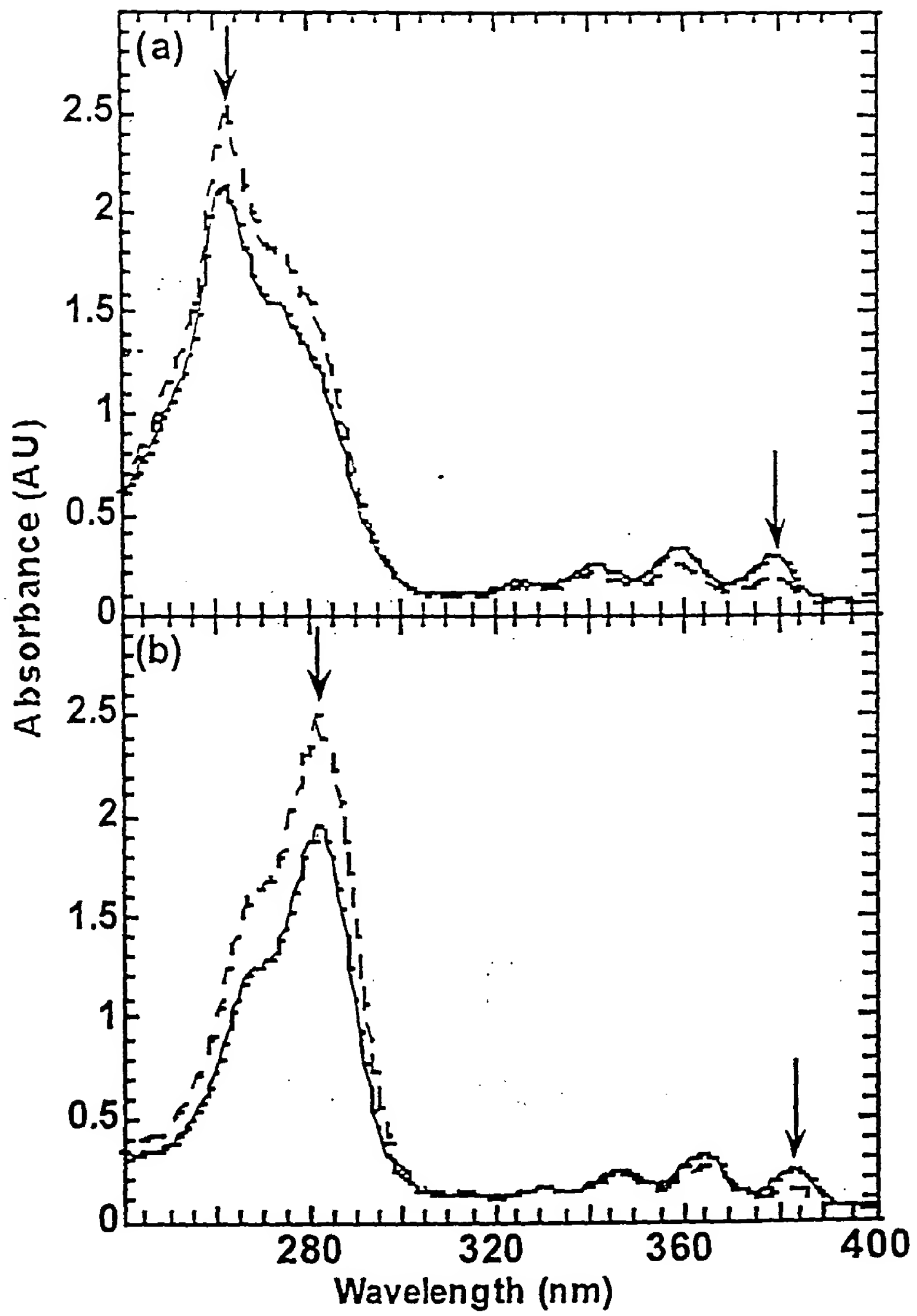
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FIG. 5



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FIG. 6



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Fig. 6A

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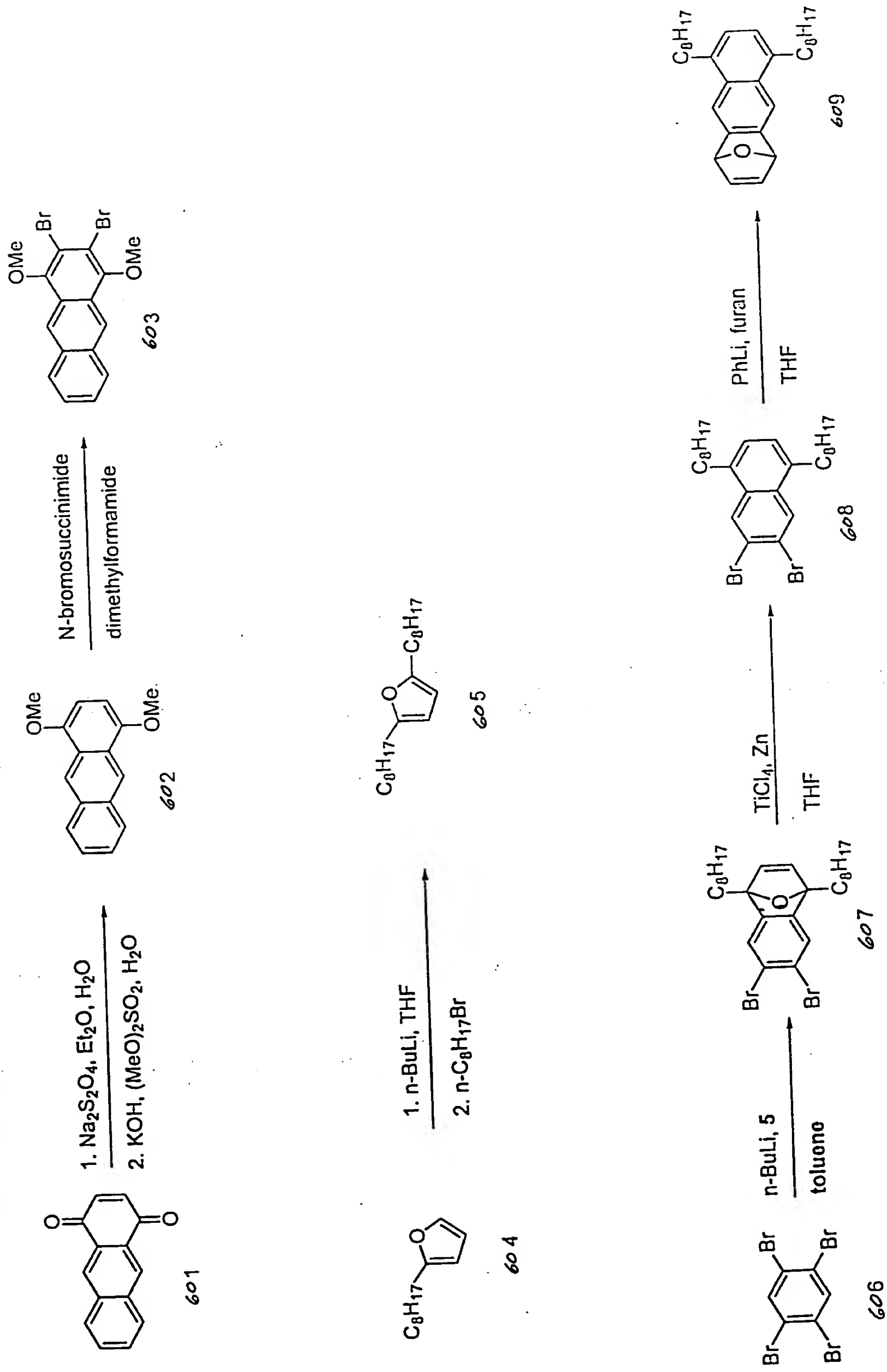
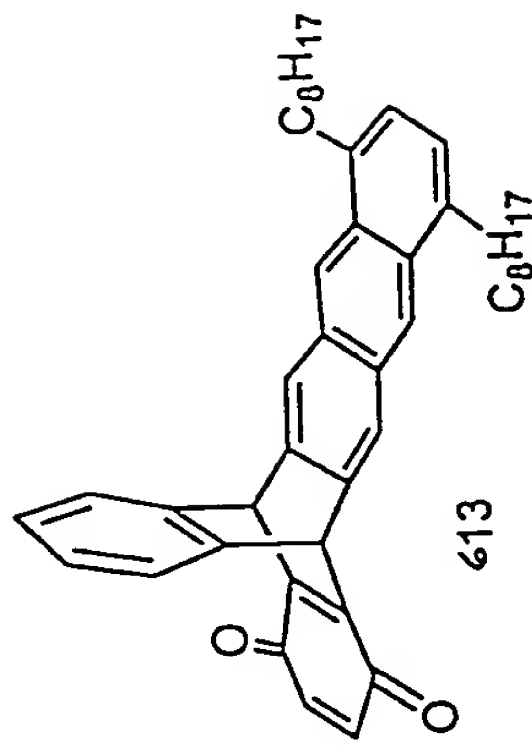
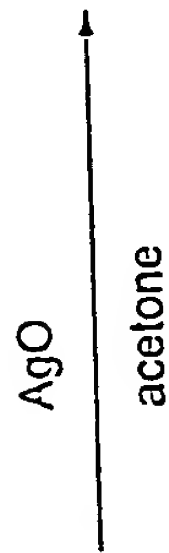
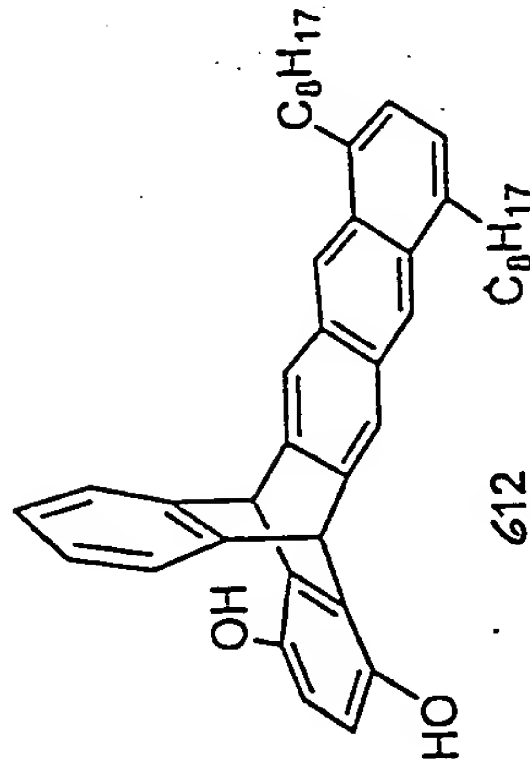
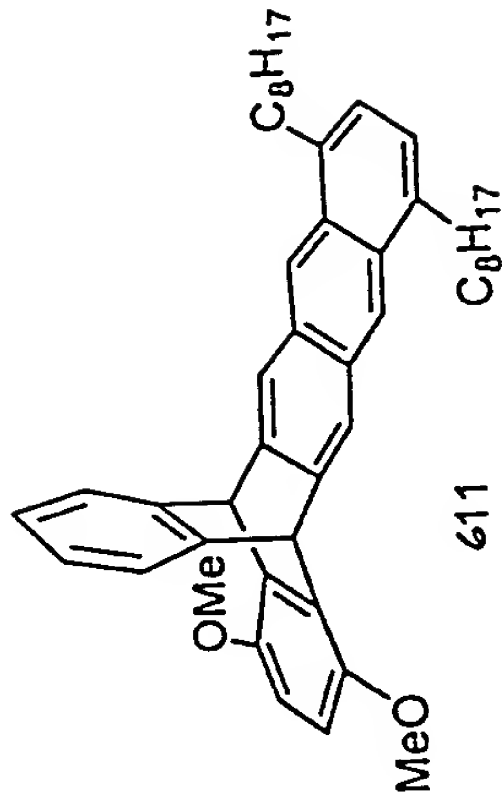
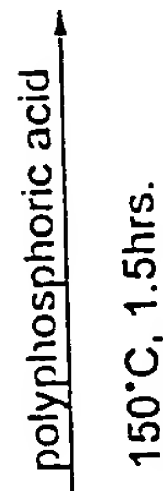
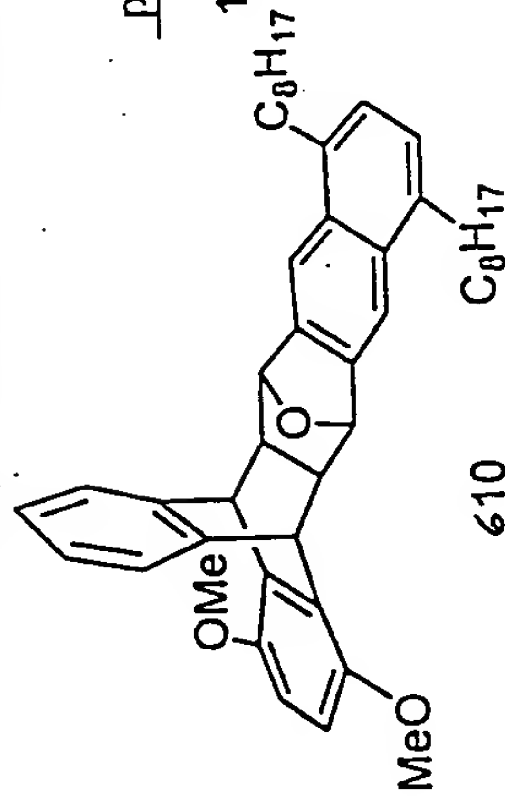
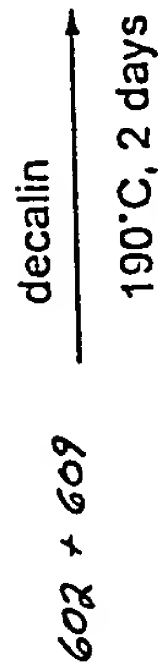


Fig. 6B



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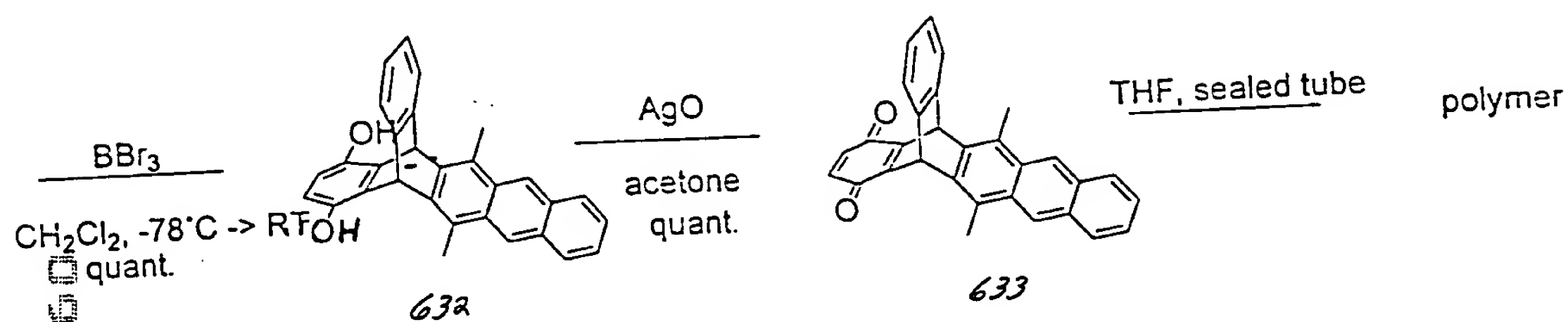
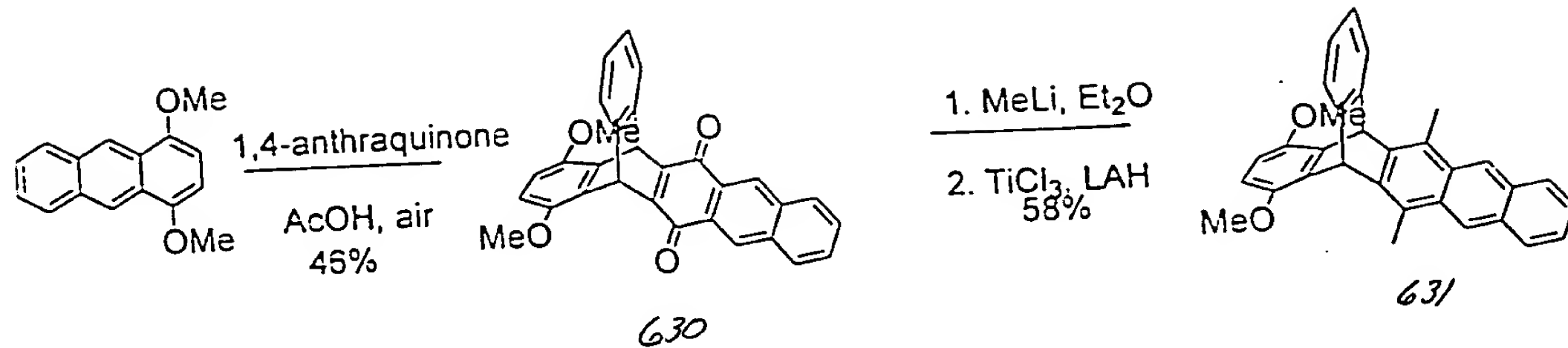


FIG. 6C

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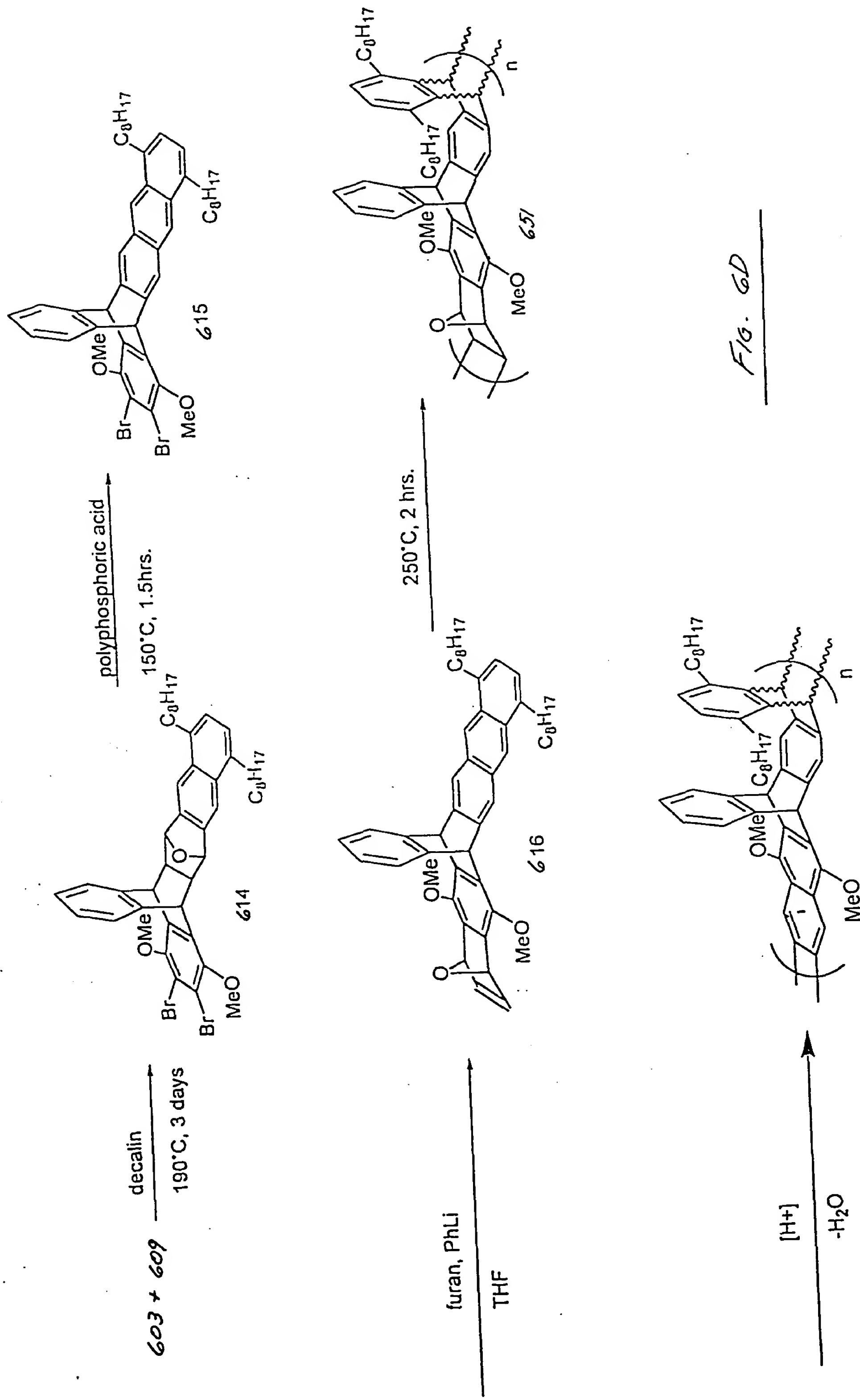


Fig. 6D

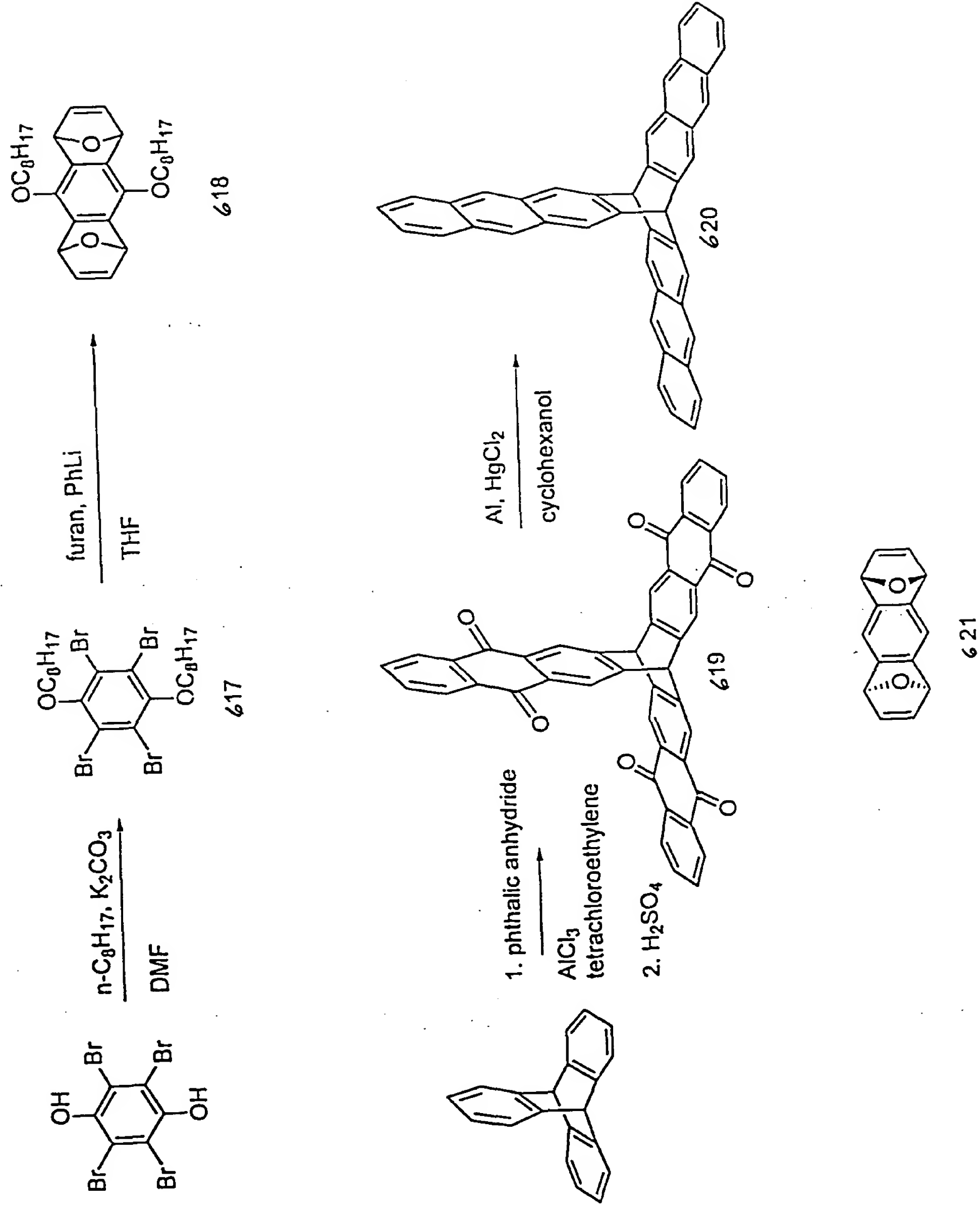
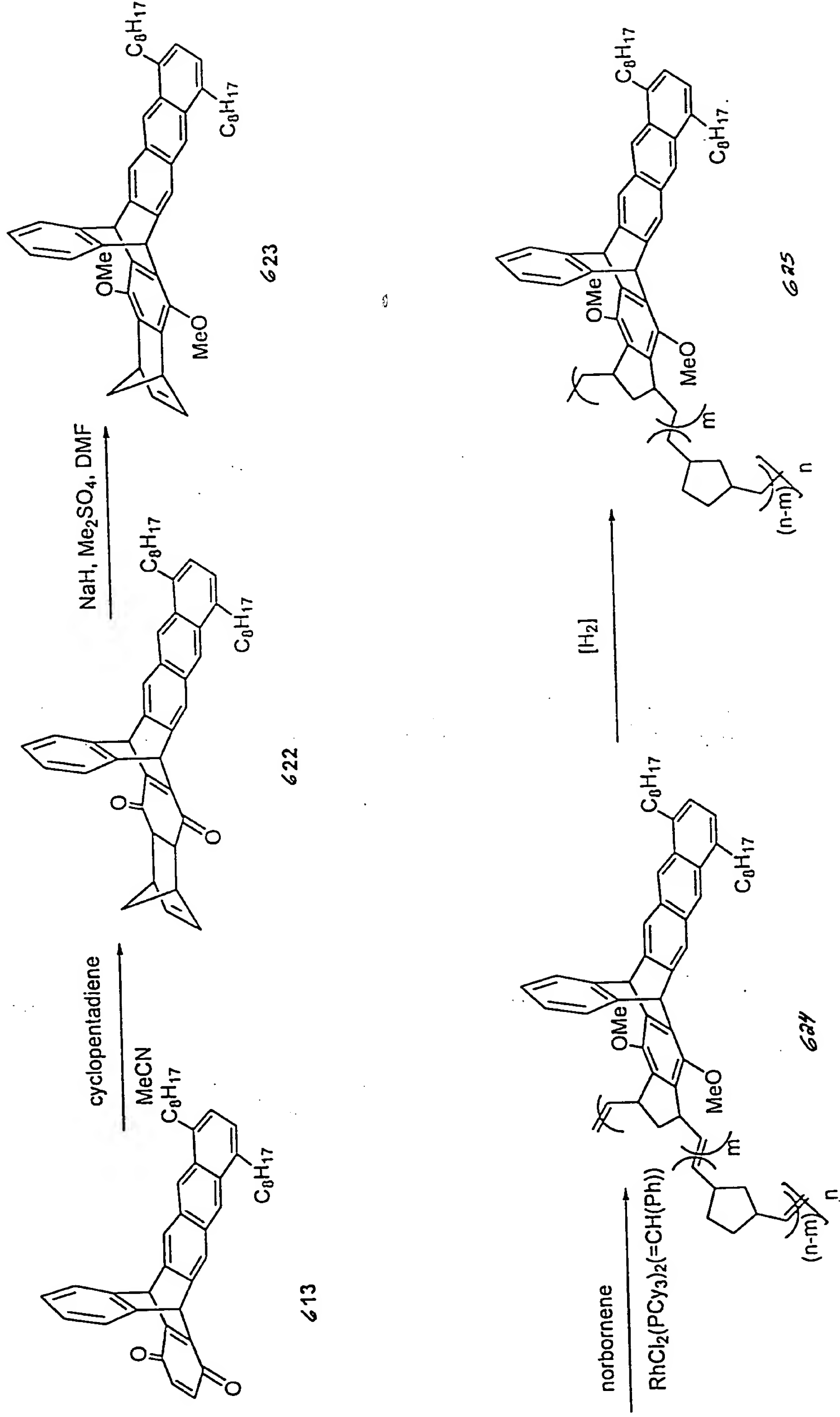


Fig. 6F

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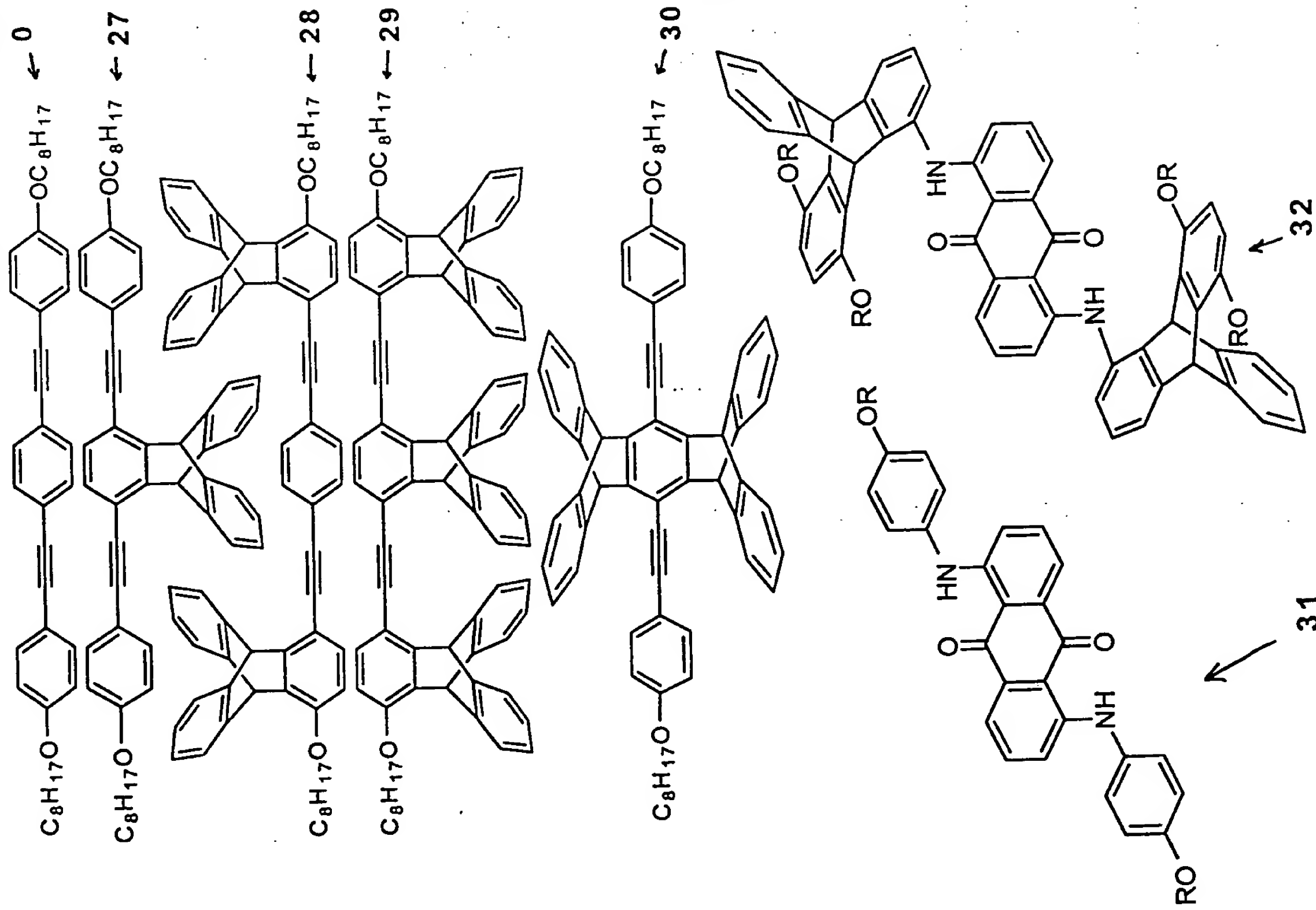


Figure 7. ($R = nC_8H_{17}$)

Figure 8.

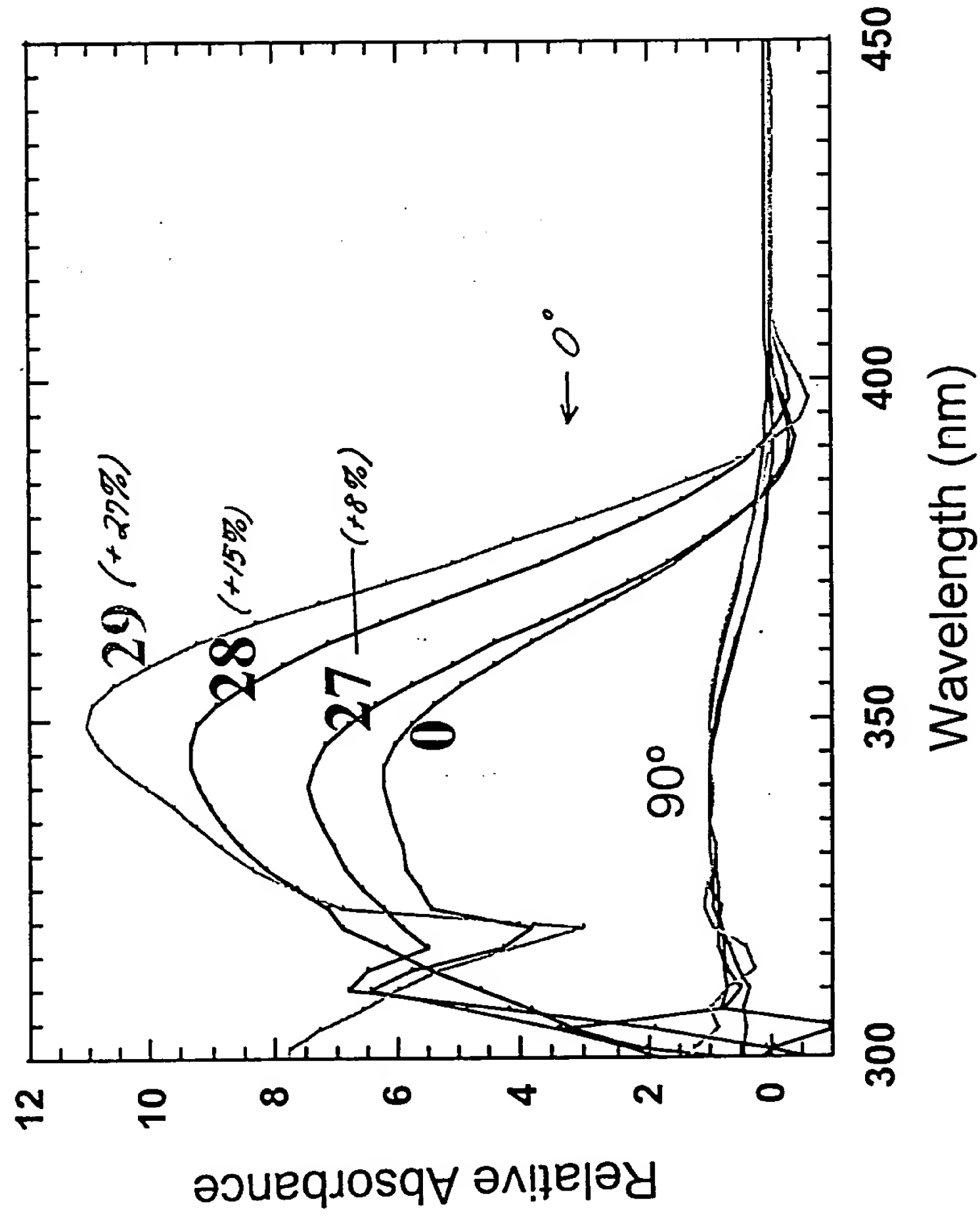
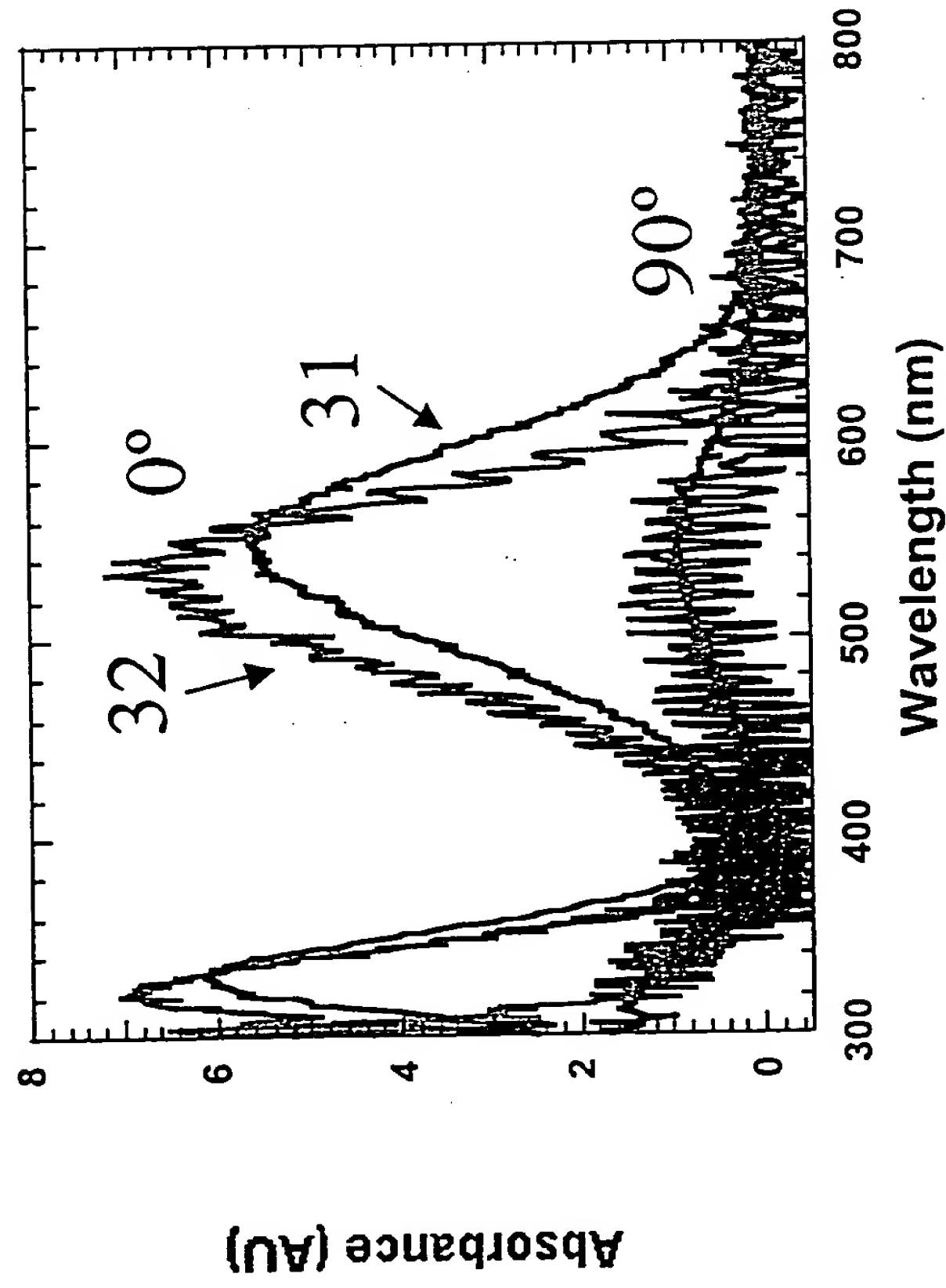


Figure 9



[illegible]

FIG. 9B

Fig. 9B

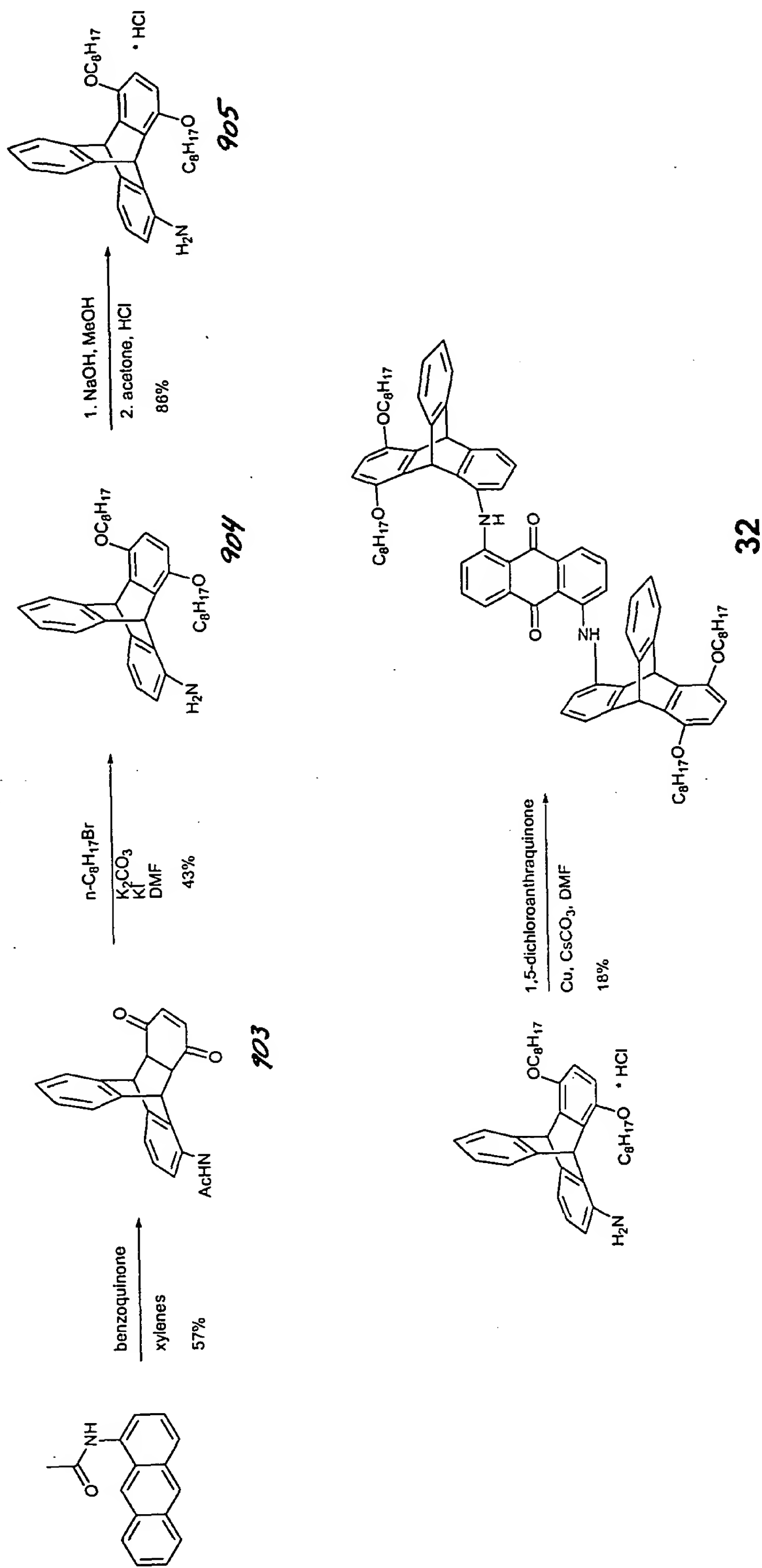
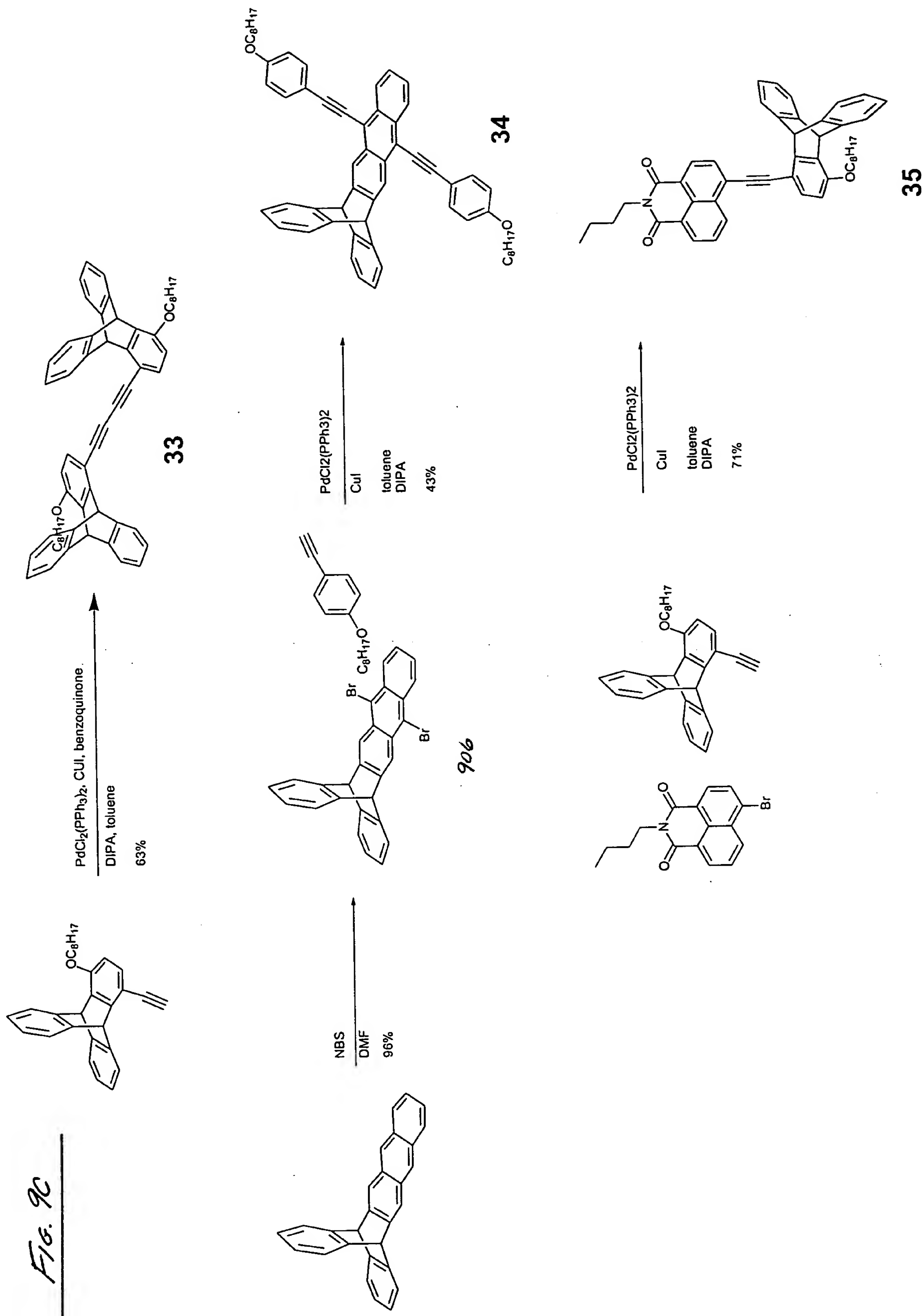


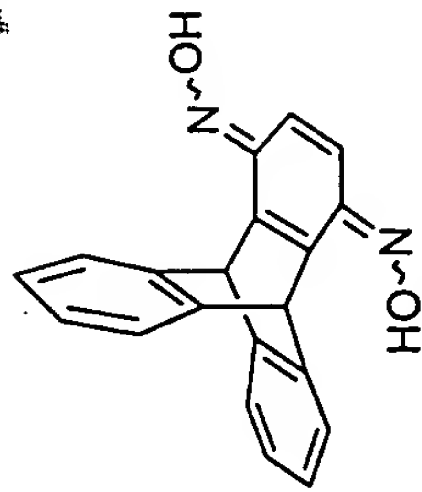
Fig. 9c

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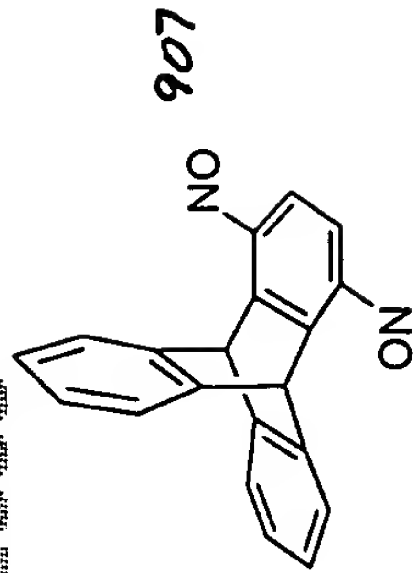
Fig. 9d



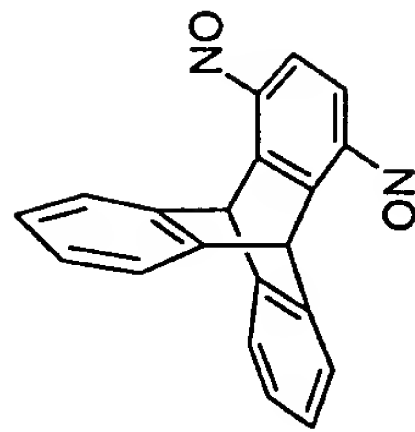
CAN

MeCN/H₂O

80%



907



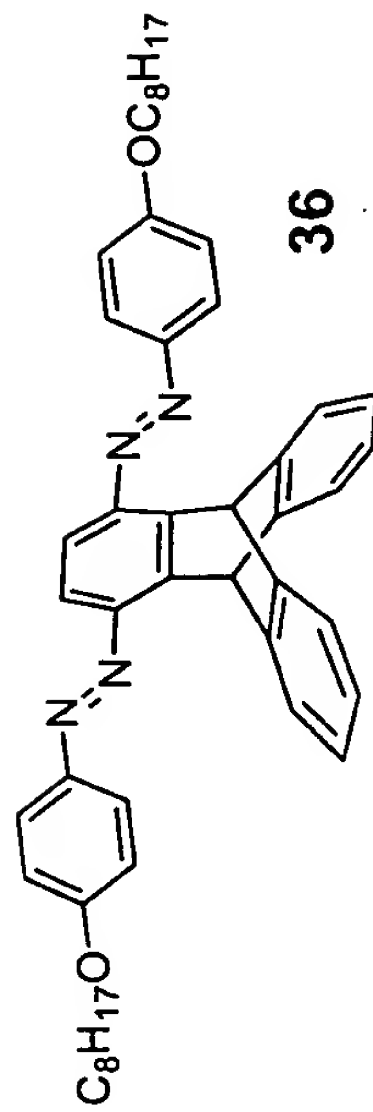
NH₂

C₈H₁₇O

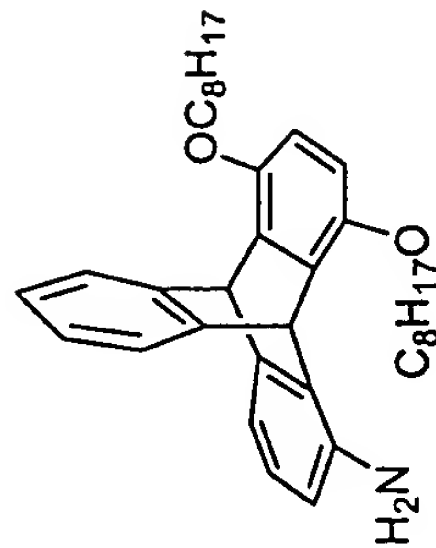
AcOH

iPrOH

36%



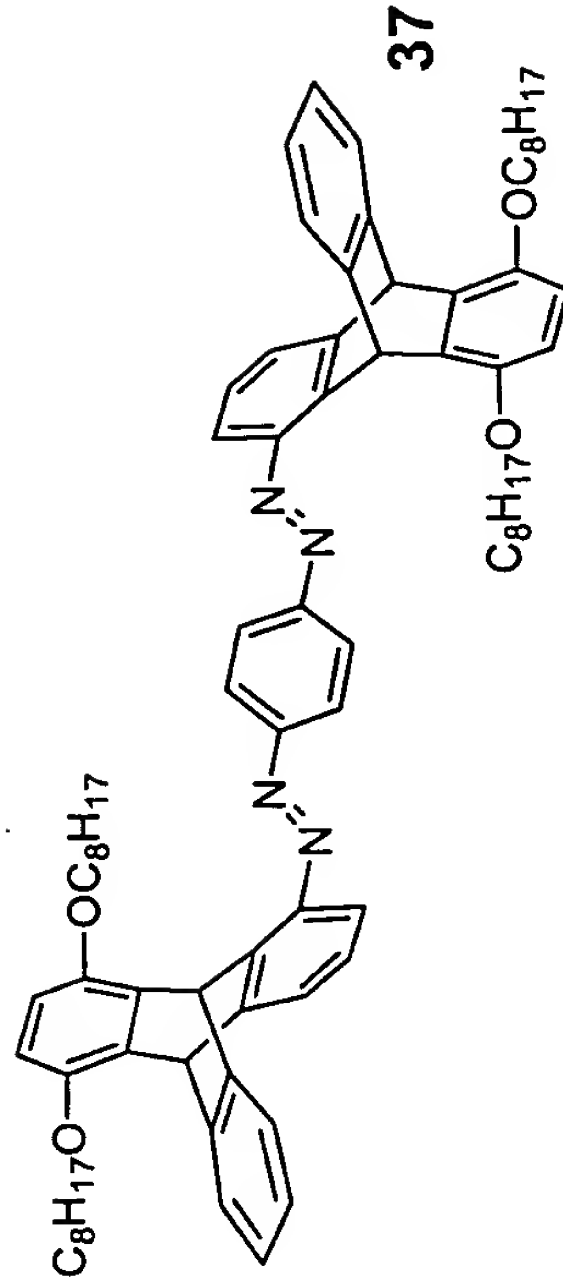
36



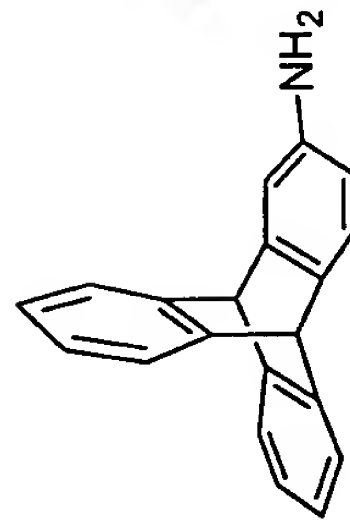
AcOH

iPrOH

27%

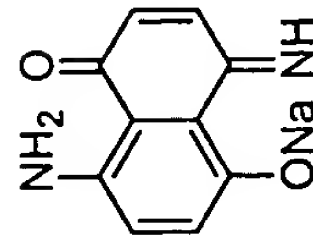


37



AcOH

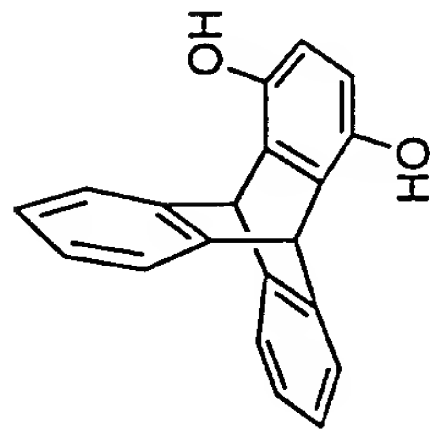
22%



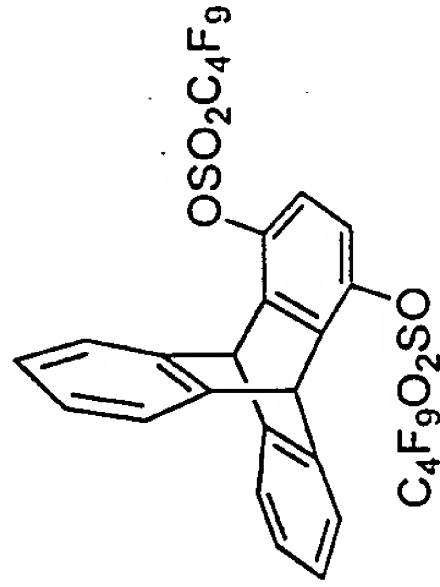
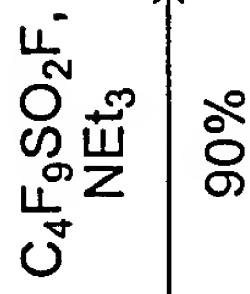
38

Fig. 9E

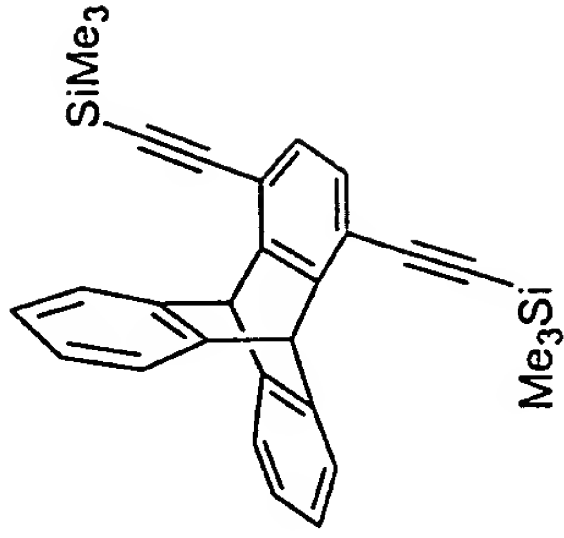
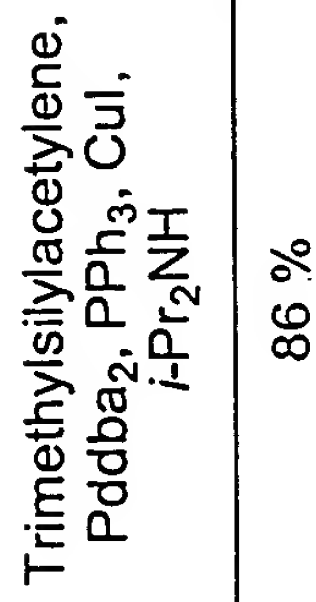
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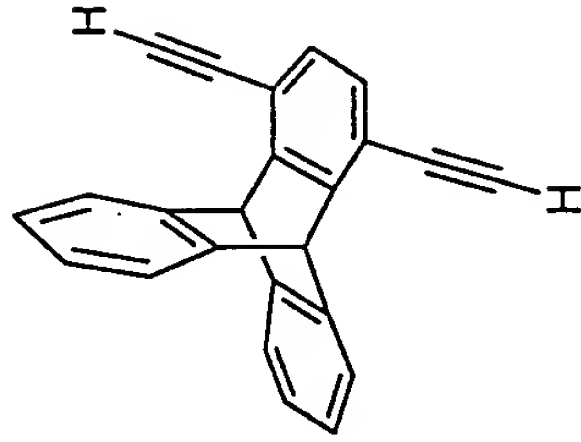
39



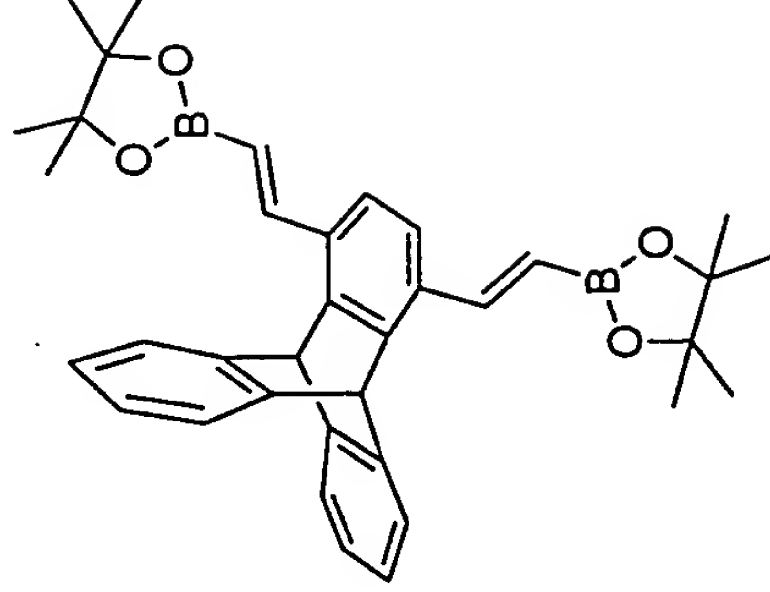
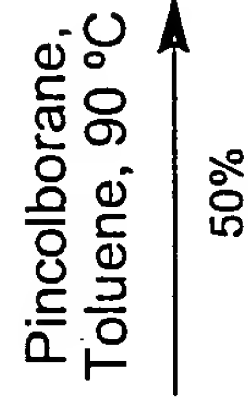
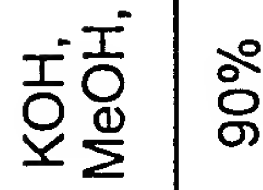
40



41

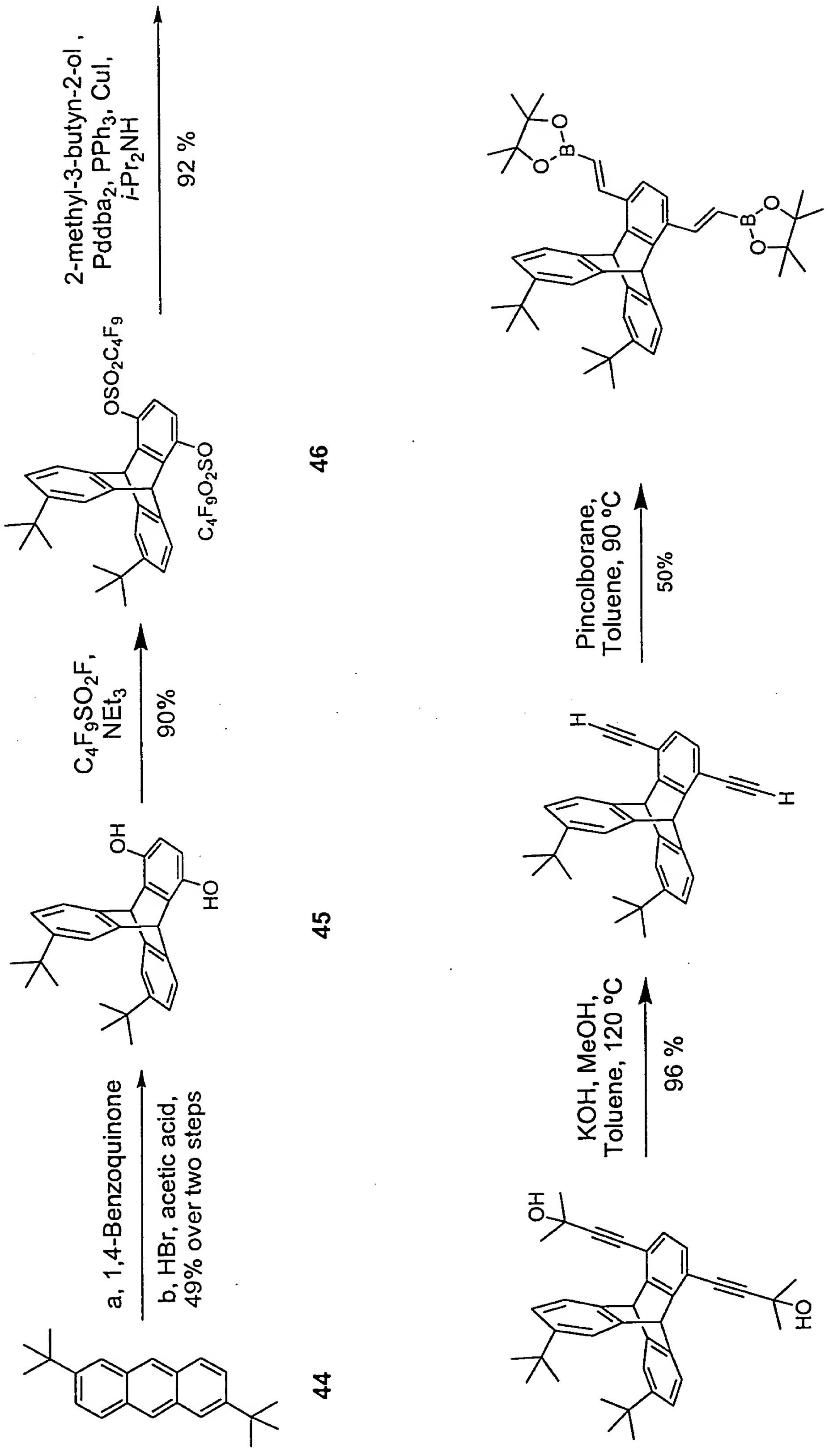


42



43

Fig. 9F



44

45

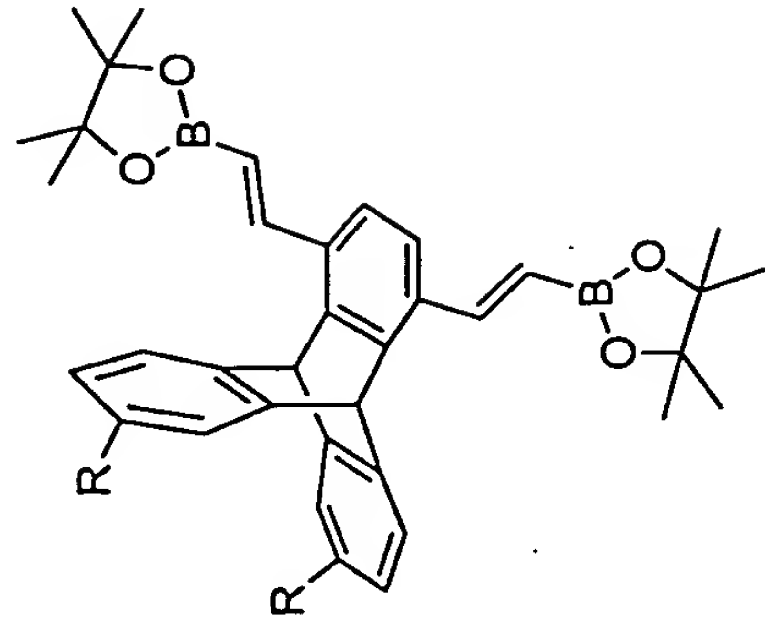
46

47

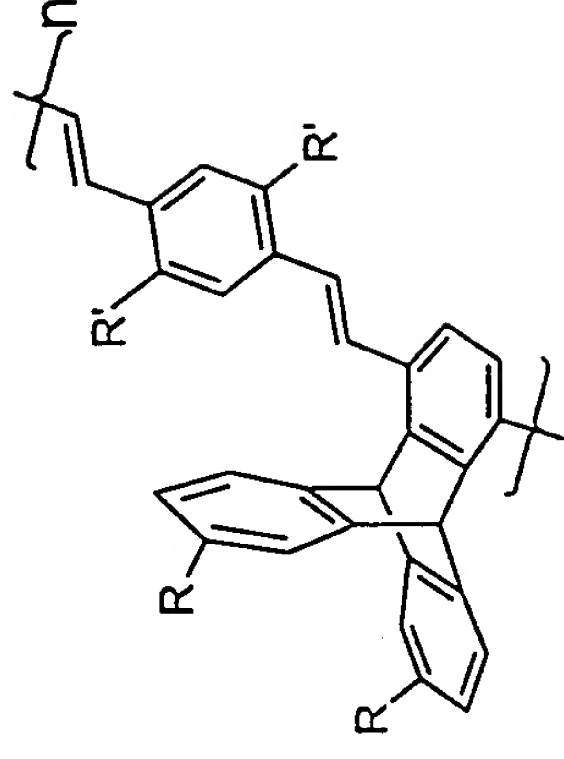
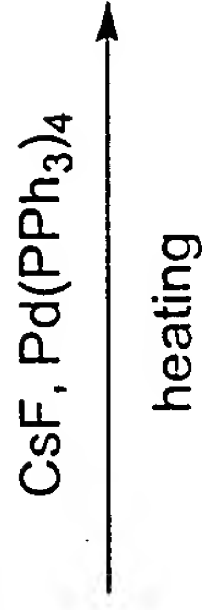
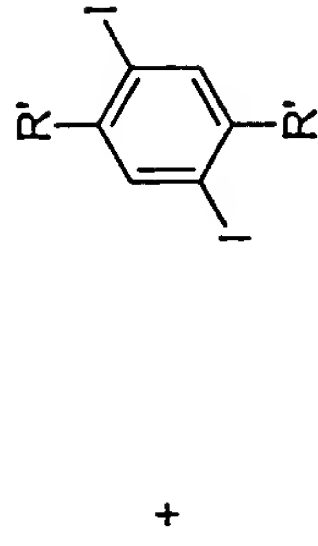
48

49

Fig. 9G T07280" 09052660

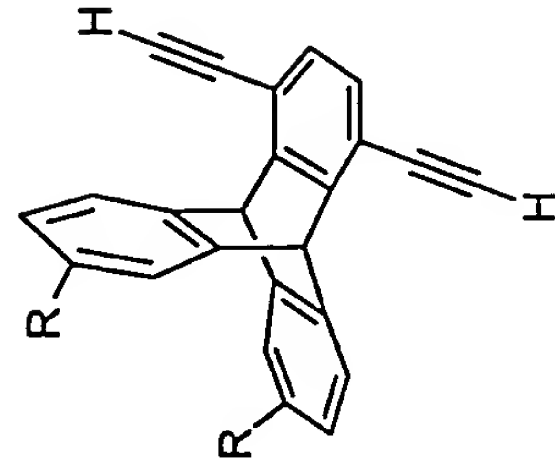


43, R = H
49, R = *tert*-butyl

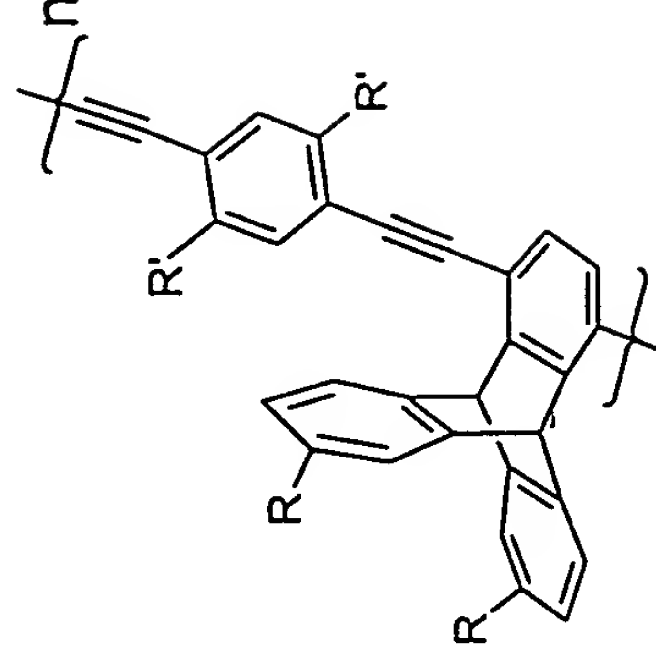
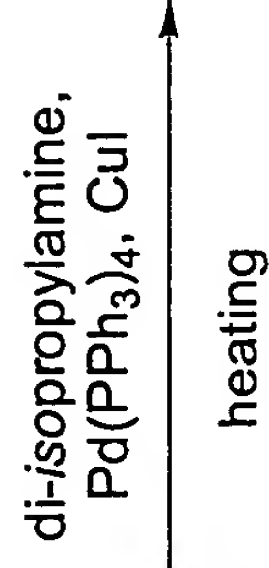
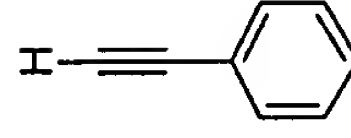
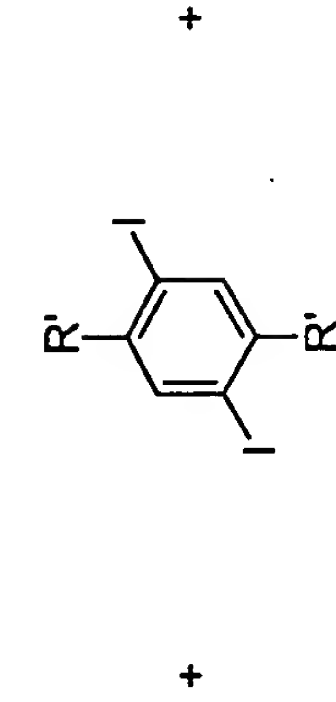


52, R = H, R' = -O-*n*-C₁₂H₂₅
53, R = *tert*-butyl, R' = -O-*n*-C₁₂H₂₅
54, R = H, R' = 2-ethyl-hexyl
55, R = *tert*-butyl, R' = 2-ethyl-hexyl

50, R' = -O-*n*-C₁₂H₂₅
51, R' = 2-ethyl-hexyl



42, R = H
48, R = *tert*-butyl



56, R = H, R' = 2-ethyl-hexyl
57, R = *tert*-butyl, R' = 2-ethyl-hexyl

58

FIG. 9H

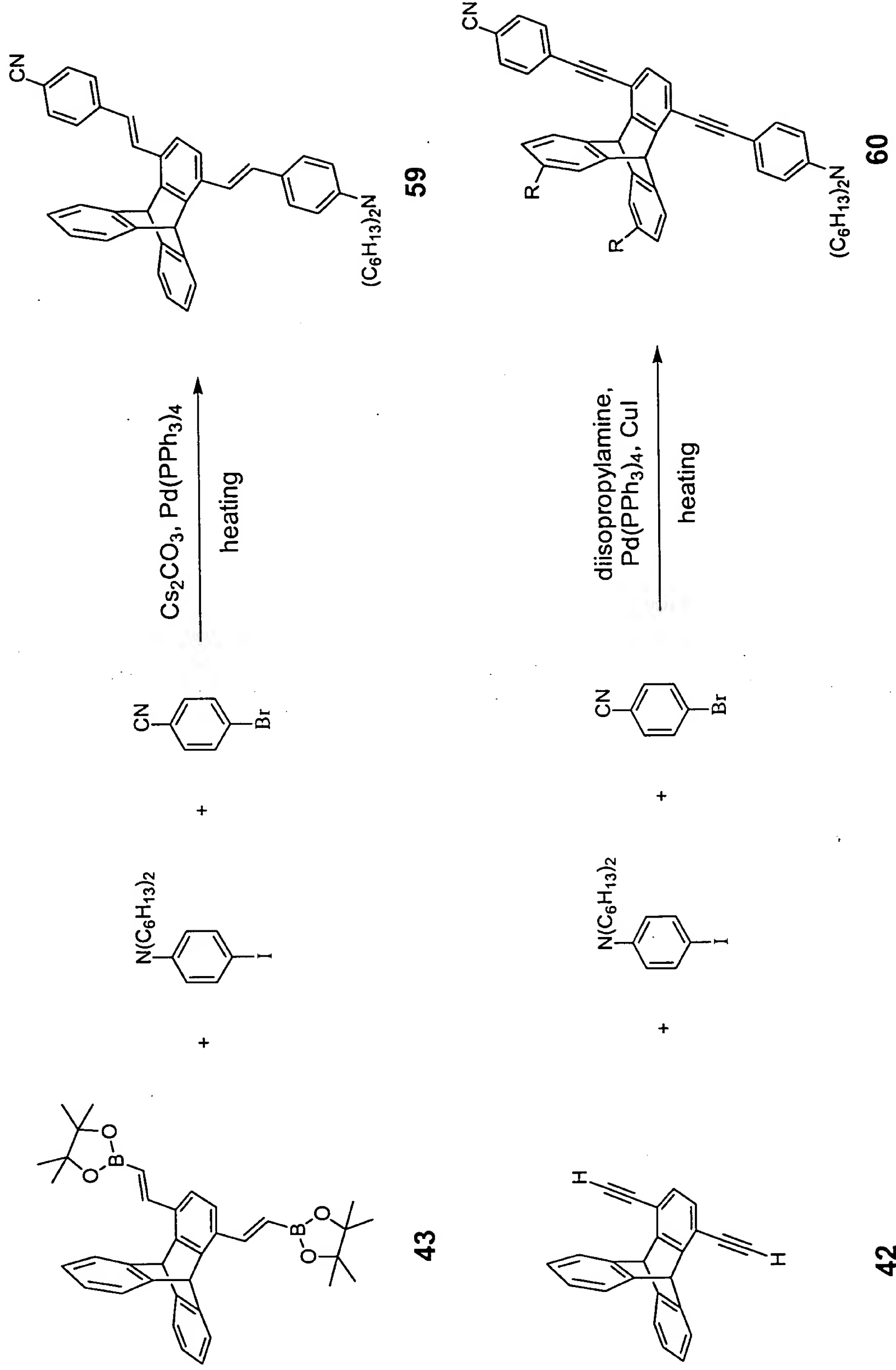
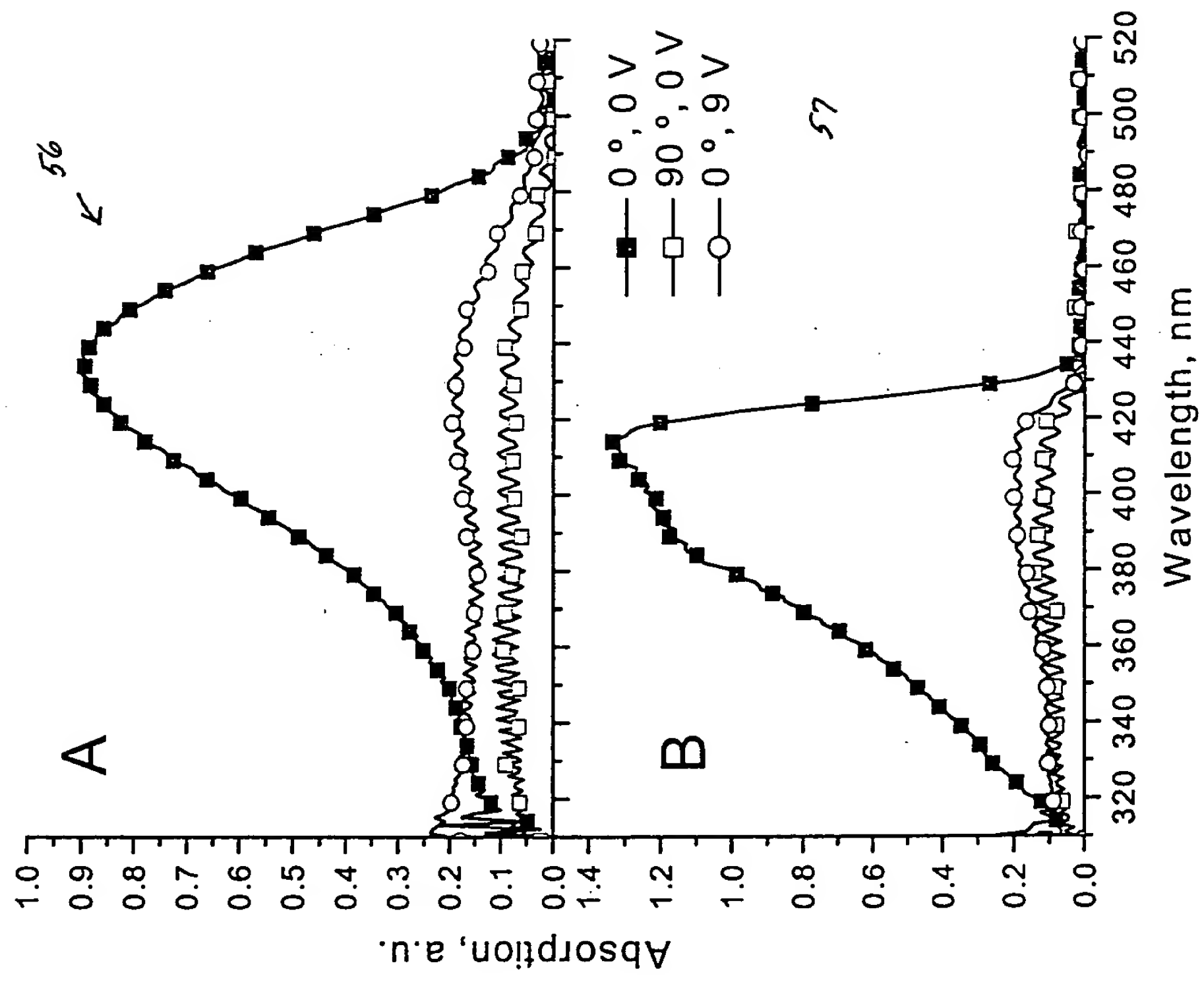


Figure 10



101230-0905E660

Figure 11

